

Self-regulation and social anxiety

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Abstract

Social anxiety, anxiety arising in situations where one is being evaluated by others, was investigated in a self-regulation framework. The self-regulation of behaviour involves setting goals, monitoring and evaluating behaviour. If there is a discrepancy between behaviour and goals an attempt is made to reduce this discrepancy. The final element in self-regulation is the reinforcement of behaviour which may take the role of thinking positive thoughts or engaging in desired activities. There may be problems in aspects of this psychological process in socially anxious individuals. The present study investigated goal setting, self-monitoring, self-evaluation, and self-reinforcement. Three measures of social anxiety were used in this study due to debate as to whether avoidance behaviours should be included in the assessment of social anxiety. (Endler, Edwards, & Vitelli, 1991; Fenigstein, Scheier, & Buss, 1978; Watson & Friend, 1969). A sample of 174 undergraduates (120 females; 50 males) completed these measures of social anxiety, along with questionnaires assessing goal setting, self-monitoring, self-evaluation and self-reinforcement behaviours.

Statistical tests showed that at the goal setting stage of self-regulation, the hypothesis that more socially anxious individuals will be less likely to expect to achieve their goals was confirmed. Public self-consciousness was used as an indicator of self-monitoring. It was expected that social anxiety would be positively correlated with public

self-consciousness but results were equivocal. Self-esteem is often used as an indicator of self-evaluation and the hypothesis that individuals who are higher in social anxiety will be lower on self-esteem was confirmed. Finally, findings confirmed the expectation that social anxiety would be negatively correlated with frequency of self-reinforcement.

Multiple regression analyses revealed that goal setting and fear of negative evaluation are significant predictors of social anxiety. Additionally, fear of negative evaluation was found to be a mediator between (i) self-esteem and social anxiety (as hypothesized) and (ii) self-reinforcement and social anxiety (investigated in an exploratory nature). Low self-esteem and low self-reinforcement are each related to an increased fear of negative evaluation which is related to increased social anxiety.

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Chapter 1

INTRODUCTION

Most people experience some anxiety in situations (e.g., public speaking) where they may be evaluated by others. Some people experience anxiety in many different social situations. Approximately 1.2 to 2.2 per cent of the population experiences social anxiety severe enough that it interferes with a person's normal functioning (possibly to the extreme of leaving a person house bound) and are diagnosed with social phobia (Myers et al., 1984). There is disagreement in the literature as to whether social phobia represents a severe level of social anxiety or whether there is a qualitative difference between the phobic disorder and the social anxiety construct (Barlow, 1988). Nevertheless, research on social anxiety has been useful in the understanding of this phobic disorder and in the formulation of treatment approaches. The purpose of the present study is to investigate social anxiety in a self-regulation framework. Self-regulation is a theory of human behaviour stating that people set goals, and monitor and evaluate behaviours. If there is a discrepancy between actual behaviours and goals, an attempt is made to reduce the discrepancy and if goals are attained, self-reinforcement may take place (Endler & Kocovski, in press). First, the construct of social anxiety will

be defined and the relevant literature on social anxiety will be reviewed. Self-regulation will then be discussed and finally, each aspect of self-regulation will be related to social anxiety.

Social Anxiety

The term social anxiety has been defined in many different ways and has come under many different labels. These include shyness, social evaluation anxiety, evaluation apprehension, and heterosocial anxiety, to name a few. These terms are not all synonymous but research in each area may be relevant to social anxiety. Shyness and social anxiety are often used interchangeably in the literature. Leary and Kowalski (1995) do differentiate the two constructs by defining shyness as the combination of social anxiety and inhibition. Buss (1980) and Hartman (1983) both use the term shyness and define it as having the following three components: a physical discomfort component, a cognitive component, and a behavioural component. They acknowledge that shy people may report varying degrees of the three components. Although active avoidance is not included as part of their definition of shyness, a behavioural component consisting of inhibition is included. Other authors have included behavioural components in their definition of social anxiety (Clark & Arkowitz, 1975; Watson & Friend, 1969). There is

varying opinion as to whether behaviours such as avoidance should be included in the measurement and definition of social anxiety. Avoiding anxiety provoking situations serves the purpose of reducing anxiety. Avoiding social situations may be a coping strategy employed by individuals who are high on social anxiety. Researchers in the coping field have identified three basic coping dimensions: task-oriented, emotion-oriented and avoidance oriented coping (Endler & Parker, 1994). Coping strategies play an important role in dealing with stressful situations. The multidimensional interaction model of stress, anxiety, and coping proposes that person and situation variables interact to induce perceptions of both threat and controllability, and these perceptions determine the level of state anxiety (Endler, 1988; 1997). Thus, socially anxious individuals may use avoidance-oriented coping in response to increases in state anxiety. Within this conceptualization, avoidance represents a coping strategy, and thus, should not be assessed as part of the assessment of social anxiety.

Watson and Friend (1969) defined social anxiety as a combination of three factors: the experience of distress, the active avoidance of social situations and the fear of receiving negative evaluations from others in social situations. Evidence exists supporting the view that behaviours (including avoidance) may be included in the assessment and definition of social anxiety. Scales assessing social anxiety that include a behavioural

component and scales that do not include a behavioural component have been found to be highly correlated with one another (Briggs & Smith, 1986). Furthermore, a factor analysis of all of the items comprising five scales was conducted and three factors emerged. These factors, however, do not represent a distinction between anxiety and behaviour. The first factor, accounting for most of the variance, was found to be a combination of social distress and avoidance items. The second factor was labelled as a social facility factor and the third factor contained items related to feelings of nervousness in the presence of an authority figure (e.g., boss).

Others believe that avoidance should not be considered a defining feature of social anxiety (Buss, 1980; Leary, 1983a). Supporting this view is the result that shy students were found to rate avoidance of social situations as the least important of five aspects of shyness (Pilkonis, 1977). Furthermore, social distress and avoidance emerge as two separate factors (Patterson & Strauss, 1972; Watson & Friend, 1969). Although there is a correlation between the affective component and the behavioural response, these should be assessed separately (Leary, 1983a). Schlenker and Leary (1982) define social anxiety as "anxiety resulting from the prospect or presence of interpersonal evaluation in real or imagined social settings" (p. 642). Similarly, Endler uses the term social evaluation anxiety when measuring anxiety resulting in situations where one is being evaluated by

others (Endler, 1983; Endler et al., 1991).

State versus Trait Social Anxiety

Spielberger (1966) differentiated between state anxiety, a transitory affective state, and trait anxiety, a disposition to experience anxiety. The State-Trait Anxiety Inventory (STAI, Spielberger, 1983) was developed to reflect this theoretical distinction. The STAI, however, assesses both trait and state anxiety as unidimensional, without an explicit focus on social anxiety. The Endler Multidimensional Anxiety Scales (EMAS; Endler et al., 1991) assess state anxiety as having a cognitive-worry and an autonomic-emotional dimension and trait anxiety as having four dimensions: physical danger, social evaluation, ambiguous, and daily routines. The multidimensional interaction model of anxiety states that the component of trait anxiety being investigated must be congruent with the stressful situation in order to obtain a person by situation interaction that would produce a change in state anxiety (Endler, 1983). For example, a social evaluation situation would interact with the dispositional social evaluation anxiety in inducing a change in state anxiety. The EMAS will be further discussed in the sections addressing the assessment of social anxiety. Thus social anxiety (termed social evaluation anxiety above) has both a state and a trait component.

Assessment of Social Anxiety

The assessment of state social anxiety can be divided into four areas. *Affective measures* are used to determine how anxious an individual feels. These may consist of a single question answered on a Likert scale. Alternatively, an Anxiety Check List (Zuckerman, 1960) can be used. Finally, a self-report measure of state anxiety can be used in a social evaluation situation (Endler et al., 1991; Spielberger, 1983). The EMAS-state would be the better choice along with the EMAS-perception which assesses the individual's perception of the situation. This is important because it allows for the determination of whether the person perceives the situation as being of a social evaluation nature. *Cognitive measures* examine the thoughts that the individual has. This can be done through thought listing procedures (Cacioppo & Petty, 1981) or via a questionnaire approach (Glass & Merluzzi, 1981). Among the *physiological measures* are the measurement of galvanic skin response, heart rate, and blood pressure. These have not been widely used in the assessment of state social anxiety. The different physiological measures do not correlate well with one another and with self-report measures (Leary, 1986). Finally, *behavioural measures* of state social anxiety would include the measurement of poor eye contact, initiating conversations, amount spoken, and fidgeting. Behaviours should be researched in the social anxiety domain but should not be used for

the assessment of social anxiety (Leary, 1983a).

The assessment of trait social anxiety (also known as dispositional social anxiety and social anxiousness) has been conducted exclusively through the use of self-report measures. One well known and used measure in this area is Watson and Friend's (1969) Social Avoidance and Distress Scale (SAD), assessing both social anxiety and avoidance. The main measure to assess social anxiety that will be used in the present study will be the Endler Multidimensional Anxiety Scales. Social evaluation is one of the dimensions of the trait scale. It has high internal consistency (above .90) and moderate to high test-retest reliability ($r = .62$ to $.79$ for a four week period; Endler, Edwards, Vitelli, & Parker, 1989). Due to the debate surrounding whether avoidance behaviours should be included in the assessment of dispositional social anxiety, the SAD will also be administered. The SAD includes items regarding behaviours. Additionally, the Self-Consciousness Scale (Fenigstein et al., 1975; which will be discussed in the Self-Regulation section) includes a social anxiety subscale (which does not address avoidance behaviours) and will also be administered in the present study. The inclusion of all three measures of social anxiety allows for the investigation of whether different results would be obtained depending on the inclusion of items assessing avoidance behaviours.

Depression

Depression is often found to be comorbid with anxiety, although they are distinct constructs (Endler, Denisoff, & Rutherford, 1998). The present study seeks to draw conclusions regarding social anxiety without being contaminated by depression. Depression will be assessed so that it can then be controlled for statistically. In this way conclusions can be drawn with more certainty that the effects obtained are due to anxiety rather than depression. The present study will assess depression using the Spielberger State-Trait Depression Inventory (Spielberger & Ritterband, 1996). This measure is an appropriate measure for non-clinical depression as would be found in an undergraduate population.

Self-Regulation

Self-regulation can be defined as the psychological processes that mediate goal directed behaviour in the absence of immediate consequences (Carver & Scheier, 1986; Endler & Kocovski, in press; Kanfer, 1970). Self-regulation involves establishing goals, monitoring behaviour, and appraising behaviour to determine if it meets the established goals of the person. If there is a discrepancy between behaviour and goals, an attempt is made to modify behaviour to reduce this discrepancy. Finally, if the individual has

succeeded in achieving the goal. self-reinforcement in the form of positive thoughts or an enjoyed activity may take place.

Most psychological theories of self-regulation are based on cybernetics, a physical theory of automatic control systems (Carver & Scheier, in press; Endler & Kocovski, in press; Kanfer, 1975). A simple example that illustrates the principles of cybernetic theory is that of a thermostat regulating the temperature in a home. The thermostat is set at a particular temperature (the standard). A thermometer monitors the temperature in the home. A comparator compares the actual reading with the standard and finally, an activator turns the heater on or off if there is a discrepancy between the standard and the temperature in the house. The temperature in the home is continually monitored by the comparator. Similarly, people set goals, monitor behaviour and evaluate behaviour to determine if there are discrepancies between goals and behaviour. If there are discrepancies, attempts are made to modify behaviour such that the discrepancies are reduced.

Failure in the self-regulation of behaviour has been presented as a contributing factor to various addictive behaviours including eating disorders and drug addictions (Kirschenbaum, 1987) and has been implicated in depression (Rehm, 1977). Several aspects of self-regulation may be contributing factors to social anxiety (Endler &

Kocovski, in press). Social anxiety is thought to arise when an individual does not behave in a manner consistent with his/her goals (Carver & Scheier, 1986; Schlenker & Leary, 1982).

Schlenker and Leary (1982) present a self-presentation model of social anxiety. Social anxiety will arise when an individual wants to make a certain impression on others but feels that he/she will be unable to do so. The amount of anxiety experienced will depend on how close the person believes he/she will come to achieving the goal, the reactions of others, and the importance of the interaction. Individuals assess behaviour and this assessment process will begin if the interaction is perceived as important or if one feels goals are not being achieved.

Similarly, Carver and Scheier (in press) state that human behaviour is controlled by feedback loops. People have a "reference value" for how they want to behave and behaviour is compared with this reference. If behaviour is not acceptable, then a change would occur to make the behaviour closer to the reference value. This assessment and appraisal process continues. These basic self-regulatory principles have been applied to social anxiety (Carver & Scheier, 1986).

The four components of self-regulation (i.e., goal setting, self-monitoring, self-appraisal, and self-reinforcement) will be discussed separately with respect to social

anxiety.

Goal Setting and Social Anxiety

There has not been much empirical research on goal setting in socially anxious individuals although it is part of some theories of social anxiety (Carver & Scheier, 1986; Arkin, Lake, & Baumgardner, 1986). Some have argued that socially anxious individuals believe that others have high standards for them to meet (Rehm, 1977; Schlenker & Leary, 1982). Wallace and Alden (1991), however, found that anxious participants did not set higher goals for themselves than nonanxious participants and did not rate others' standards as higher than did the nonanxious group. Although it has been found that socially anxious individuals do not objectively rate others' as having higher standards for them, they do seem to believe that others have high standards for them (Alden, Bieling, & Wallace, 1994; Wallace & Alden). The Socially Prescribed subscale of the Multidimensional Perfectionism Scale (Hewitt & Flett, 1991) was used in the Wallace and Alden study to measure the standards that the participants believe others have for them. It appears that socially anxious participants believe that others have perfectionistic standards for them but this is not demonstrated in their objective ratings of the standards of others.

Doerfler and Aron (1995) also found that socially anxious and non-anxious

participants did not differ in their goal setting but the socially anxious participants did not expect to achieve their goals. Thus it may be that socially anxious individuals set goals that are comparable to nonanxious people but that they do not expect to attain their goals. The Generalized Expectancy for Success Scale (Fibell & Hale, 1978) will be administered in the present study to examine this issue. It is expected that expectancy for success will be a predictor of social anxiety in that socially anxious individuals will not expect to attain goals.

Self-Monitoring and Social Anxiety

Socially anxious individuals may engage in perseverative self-monitoring and self-appraisal which may contribute to their anxiety. According to Snyder "people differ in the extent to which they can and do observe and control their expressive behavior and self-presentation" (1986: p. 125). Snyder (1974) presented a scale to assess this self-monitoring construct in which the following five components were addressed: concern for appropriateness of social behaviour, attention to social comparison information, ability to control or modify self-presentation, use of this modifying ability in particular situations and variability of social behaviour in different situations. This conceptualization of self-monitoring is of an adaptive nature, that is, a high score on this

scale is more adaptive than a low score. Lennox and Wolfe (1984), however, found that social anxiety is positively correlated with four of the five components assessed by this self-monitoring scale, which contradicts the theory that high self-monitors are more effective in the realm of social interaction. These findings make the interpretability of the self-monitoring scale with respect to social anxiety difficult. It may be that socially anxious individuals engage in perseverative self-monitoring and are too concerned with their presentation style. This overconcern may contribute to their anxiety. This interpretation is speculative. The present study investigating social anxiety and self-regulation, will assess the tendency to be aware of oneself as a social object as an indication of self-monitoring.

The tendency to be aware of oneself as a social object is measured by the Public Self-consciousness subscale of the Self-consciousness Scale (Fenigstein et al., 1975). This scale assesses concern and awareness regarding aspects of social situations and theoretically should be positively associated with social anxiety. Several researchers have found a correlation between public self-consciousness and social anxiety (Buss, 1980; Fenigstein et al., 1975; Lennox, 1984; Pilkonis, 1977), while others have not (Linder & Der-Karabetian, 1986). Monfries and Kafer (1993) found that the two constructs are correlated but when the social distress and social avoidance components of

the SAD were separated, public self-consciousness correlated only with the social distress component. Again, the issue of whether behavioural factors, such as the avoidance of social situations, should be included in the assessment of social anxiety arises. In the present study, it is expected that public self-consciousness will be a predictor of social anxiety.

The Self-Consciousness Scale consists of three subscales: Public Self-Consciousness, Private Self-Consciousness, and Social Anxiety. Recently, researchers have investigated the factor structure of this scale and have discovered that the Private and Public Self-Consciousness subscales each consist of two factors (Mittal & Balasubramanian, 1987; Watson, Headrick, & McKinney, 1989; Watson, Morris, Ramsey, Hickman, & Waddell, 1996). The Private Self-Consciousness Scale consists of the following factors: 1) Internal State Awareness which has been found to be adaptive and 2) Self-Reflectiveness which has been found to be maladaptive. The Public Self-Consciousness scale consists of the following factors: 1) Appearance Consciousness and 2) Style Consciousness. The Private Self-Consciousness subscales have been found to correlate in opposite directions with such constructs as depression, identity seeking, shame, guilt, and self-esteem. The Public Self-Consciousness factors, however, have been found to converge and diverge with other constructs similarly. The factor structure of the

subscales will be further investigated in this study, as well as the pattern of correlations with other constructs. The Self-Reflectiveness scale is expected to be positively correlated with social anxiety.

Furthermore, participants can be asked to rate the frequency of self-monitoring and the frequency of self-appraisal. Previous research has shown that the frequency of self-appraisal is correlated with self-consciousness (Alden, Teschuk & Tee, 1992), although the frequency of self-appraisal has not been found to differ for socially anxious and non-anxious groups (Alden et al., 1994). Perseverative self-monitoring and evaluation, however, are speculated to play a role in social anxiety and will be investigated in this study.

Self-Evaluation and Social Anxiety

As well as engaging in frequent self-appraisal, socially anxious individuals may evaluate themselves negatively. Lake and Arkin (1985) found that subjects who were higher in social anxiety rated positive feedback from evaluators as less accurate than participants who were low in social anxiety. Cacioppo, Glass, and Merluzzi (1979) investigated heterosocial anxiety in male subjects anticipating an interaction with a female. The measure of social anxiety was the Social Avoidance and Distress scale. Men

who were high in social anxiety produced more negative self-statements and evaluated themselves more negatively than men who were low in social anxiety. Clark and Arkowitz (1975) also found that subjects who were high in social anxiety rated themselves more unfavourably on a social encounter and that they had lower self-esteem.

Measures of self-esteem have often been used as an indicator of self-evaluation. Jones, Briggs, and Smith (1986) found negative correlations (ranging from -.52 to -.58) between self-esteem and various measures of social anxiety. Leary, in validating his Interaction Anxiousness Scale designed to measure social anxiety, found that it was negatively correlated with self-esteem ($r = -.36$, Leary & Kowalski, 1993; $r = -.18$, Leary, 1983a).

As previously stated, and as is evident in this section, research in social anxiety comes under many different labels. Negative correlations have also been found between shyness and self-esteem ($r = -.48$, Zimbardo, 1977; $r = -.51$, Cheek & Buss, 1981). Furthermore, in the communication apprehension literature, several researchers have found a moderately strong negative correlation (ranging from -.48 to -.72) between self-esteem and communication apprehension (McCroskey, Daly, Richmond, & Falcione, 1977; and see review by McCroskey, 1977). Communication apprehension is "an individual's level of fear or anxiety associated with either real or anticipated

communication with another person or persons" (McCroskey, 1977, p. 78): this construct may be considered to be a subtype of social anxiety (Leary & Kowalski, 1995).

Thus the negative relationship between social anxiety and self-esteem seems to be a stable finding. Evaluating oneself unfavourably may lead to the expectation that others will evaluate negatively as well (Leary & Kowalski, 1995). Thus, it may be the case that low self-esteem leads to an increased fear of negative evaluation from others which leads to increased social anxiety.

The present study will use Rosenberg's Self Esteem Scale as an indicator of self-evaluation (Rosenberg, 1965). It is expected that self esteem will be a predictor of social anxiety. Furthermore, to determine if the fear of negative evaluation is a mediator between low self esteem and high social anxiety, the Fear of Negative Evaluation scale (Watson & Friend, 1969) will also be administered. The brief version rather than the original will be used (Leary, 1983b). It is expected that fear of negative evaluation will predict social anxiety and that it will be found to be a mediator between self esteem and social anxiety.

Self-Reinforcement and Social Anxiety

Self-reinforcement is the final element in self-regulation theory (Kanfer & Karoly,

1972). Upon appraising behaviour, if it meets with the pre-set goal, self-reinforcement may or may not take place. A low frequency of positive self-reinforcement may be an antecedent of social anxiety. Rehm and Marston (1968) placed male college students who reported social anxiety into one of three therapy conditions. The experimental condition involved increasing the client's rate of self-reinforcement. There were two control conditions. In one of the control conditions, participants received non-directive therapy and in the other participants did not receive any form of therapy. The greatest improvement was found for subjects in the experimental self-reinforcement therapy condition. Individuals high in social anxiety may engage in a low frequency of self-reinforcement. Related research has shown that individuals who are high in social anxiety report less positive thoughts and more negative thoughts (Bruch, Mattia, Heimberg, & Holt, 1993).

The self-reinforcement construct will be measured by the Frequency of Self-Reinforcement Questionnaire (Heiby, 1982). Reinforcement may consist of allowing oneself to take part in an activity or simply thinking positively. It is expected that a low frequency of self-reinforcement will be predictive of social anxiety.

Gender Differences:

Much of the relevant research in this area has not tested for gender differences or reported data separately for males and females. The following is a review of the literature that discusses gender differences with respect to constructs in the present study. Endler, Lobel, Parker, and Schmitz (1991) found that women were more likely to report being anxious in social evaluation situations than men. A study with adolescents found no gender differences with respect to depression and social anxiety (Allsopp & Williams, 1991). The prevalence of social phobia is not significantly different for men and women (Cameron & Hill, 1989). Furthermore, a meta-analysis examining personality differences on various constructs found no sex differences for both social anxiety and reflectiveness (Feingold, 1994). Males, however, were found to have slightly higher self-esteem than females, a result that has also been reported by other researchers (McGregor, Miller, Mayleben, & Buzzanga, 1991; Skaalvik, 1986). Powers and Rossman (1984) found no gender differences for expectancy for success. Conway and Giannopoulos (1993) found no gender differences in analyses correlating self-esteem, self-consciousness, and depression.

There appears to be the stable finding that males are slightly higher on self-esteem than females. Thus, for the present study, males are expected to have slightly higher self-

esteem than females. Other research in this area has not resulted in such clearcut findings. Because of the equivocal results with respect to the existence of gender differences in social anxiety, no other a priori predictions will be made. Additionally, correlations among the variables will be examined separately for males and females.

Present Study

The present study investigates social anxiety in a self-regulation framework. Goal setting, self-monitoring, self-evaluation and self-reinforcement behaviours will be investigated with respect to social anxiety. The specific hypotheses are outlined below.

Summary of Hypotheses:

1. *Goal Setting*: It is expected that expectancy to attain goals will be negatively correlated with social anxiety and will be a predictor of social anxiety. Thus, individuals who are higher on the expectancy to attain their goals will be lower on social anxiety.
2. *Self-Monitoring*: It is expected that public self-consciousness will be positively correlated with social anxiety and will be a predictor of social anxiety. Thus, individuals who are higher on public self-consciousness are expected to be higher on social anxiety. It is also expected that the self-reflectiveness component of private self-consciousness will be positively correlated with social anxiety.

3. *Self-Evaluation*: It is expected that self-esteem will be negatively correlated with and will be a predictor of social anxiety. Thus, individuals who are higher on self-esteem are expected to be lower on social anxiety.

4. *Fear of Negative Evaluation*: It is expected that fear of negative evaluation will be positively correlated with and will be a predictor of social anxiety. Individuals who are higher on fear of negative evaluation are expected to be higher on social anxiety.

5. *Self-Reinforcement*: It is expected that frequency of self-reinforcement behaviour will be negatively correlated with social anxiety and will be a predictor of social anxiety. Individuals who reinforce behaviour on a less frequent basis are expected to be higher on social anxiety.

6. *Frequency of Self-Monitoring and Self-Evaluation*: A positive relationship between social anxiety and each of frequency of self-monitoring and frequency of self-evaluation are expected. Individuals that monitor and evaluate their behaviour more frequently are expected to be higher on social anxiety.

7. *Self-Consciousness Scale*: The factor structure of the Self-Consciousness scale will be investigated. For the private self-consciousness scale: it is expected that the Self-Reflectiveness factor will directly correlate with the maladaptive factors of social anxiety and fear of negative evaluation and inversely correlate with the adaptive factors of self-

esteem, expectancy for success, and self-reinforcement. The opposite relationships are expected for Internal State Awareness. For the public self-consciousness scale: a similar pattern is expected for both Appearance Consciousness and Style Consciousness.

8. *Mediation hypothesis*: It is expected that the fear of negative evaluation will act as a mediator between self-esteem and social anxiety. The negative relationship between self-esteem and social anxiety will be accounted for by fear of negative evaluation.

Previous studies have investigated the relationship of self-consciousness, self-esteem, and fear of negative evaluation with social anxiety. The relationships between expectancy for success and the frequency of self-reinforcement with social anxiety have not been researched. The main purpose of the present study is to determine how much of the variance in social anxiety can be accounted for by all of the aspects of self-regulation. Goal setting, self-monitoring, self-appraisal, and self-reinforcement have not previously been investigated simultaneously (i.e., in one study). Furthermore, the fear of negative evaluation as a mediator between self-esteem and social anxiety has not been tested. Finally, this study will add to previous research on the factor structure of the Self-Consciousness Scale. The relationships among the subscales of the Self-Consciousness Scale with fear of negative evaluation, expectancy for success, and frequency of self-reinforcement have not been investigated.

Chapter 2

METHOD

Participants

Participants were 124 female and 50 male undergraduate students enrolled in an introductory psychology course at York University. Participants received course credit for their participation. Participants average age was 20.45 years for females (SD = 2.84 years) and 20.56 years for men (SD = 1.73 years). Womens' ages ranged from 18 to 41 years and the age range for men was 18 to 26 years.

Materials

A questionnaire package was prepared consisting of a consent form, a debriefing form, and the following:

Biographical Information Form (see Appendix A): This form contains biographical information (i.e., age and gender), two rating scale questions regarding frequency of self-monitoring and self-appraisal, and several questions for exploratory information. Ideally, it would have been preferable if established scales (that are psychometrically sound) were used to assess the frequency of self-monitoring and the frequency of self-appraisal. These

could not be found in the literature. It was decided that preliminary data would be gathered with one item for each construct as had been done in previous research (Alden et al., 1994). Feedback was obtained from pilot participants that reflected an understanding of the meaning of these items.

Endler Multidimensional Anxiety Scales (EMAS: Endler et al., 1991) (see Appendix B):

The EMAS consists of 3 scales:

EMAS-State: consists of two five-point intensity Likert subscales containing ten items each: cognitive-worry and autonomic-emotional. It has high internal consistency (ranging from .78 to .91) and low test-retest reliability which is expected due to the variable nature of the construct being assessed.

EMAS-Trait: consists of four subscales containing 15 response items each on a five-point intensity Likert scale: social-evaluation, ambiguous, physical danger, and daily routines.

The social evaluation subscale was used to assess dispositional social anxiety. Internal consistency for the social evaluation subscale has been found to range from .87 to .94 and test-retest has been found to range from .62 to .79 (Endler et al., 1991).

EMAS-Perception: consists of five five-point intensity Likert scale items and three open-ended questions assessing the respondent's perception of type and amount of threat. This

scale is used in conjunction with the state and trait measures to determine the type of situation (i.e., social evaluation, physical danger, ambiguous, or daily routines) the participant is responding to.

Spielberger State-Trait Depression Inventory (Spielberger & Ritterband, 1996) (see Appendix C): Depression was also assessed in order to control for the comorbidity between depression and social anxiety and not knowing which is responsible for the effects obtained. The state and trait depression scales each consist of 10 four-point intensity Likert scale items. The Spielberger State-Trait Depression Inventory is an appropriate measure of non-clinical depression. Alpha reliabilities for the state scale have been determined to be .93 for males and .87 for females.

Generalized Expectancy for Success Scale (GESS; Fibel & Hale, 1978) (see Appendix D): A 30-item five-point intensity Likert scale assessing an individual's expectancy to attain desired goals. It has high internal consistency (.90) and test-retest reliability of .83 with a 6 week interval.

Self-Consciousness Scale (SCS; Fenigstein et al., 1975) (see Appendix E): A 23-item

five-point intensity Likert scale with test-retest reliabilities ranging from .73 to .84 (for the subscales and total) that measures the tendency to direct attention towards or away from oneself consisting of three subscales: Private self-consciousness (10 items), Public self-consciousness (7 items), and Social Anxiety (6 items).

Rosenberg Self-Esteem Scale (Rosenberg, 1965) (see Appendix F): A 10-item four-point intensity Likert scale that has high internal consistency and test-retest reliability with a 2 week interval (.85) assessing self-esteem.

Brief-Fear of Negative Evaluation Scale (Brief-FNE: Leary, 1983b; Watson & Friend, 1969) (see Appendix G): A 12 item five-point intensity Likert scale assessing apprehension or distress as a result of others' evaluations. This brief version highly correlates (.96) with the original scale, has high internal consistency (.90) and a test-retest correlation of .75 with a 4 week interval. It is considerably shorter than the original version.

Frequency of Self-Reinforcement Questionnaire (FSR: Heiby, 1982) (see Appendix H): A 30-item true-false scale with high internal consistency (.87) and high test-retest

reliability (.92) assessing the degree to which individuals engage in self-reinforcing behaviours.

Social Avoidance and Distress Scale (SAD: Watson & Friend, 1969) (see Appendix I): A 28-item true/false scale assessing 1) distress and anxiety in social interactions and 2) the desire to avoid and actual avoidance of social situations. This scale has high internal consistency and adequate test-retest reliability. A lot of the research in the area of social anxiety has been conducted with the use of this particular instrument. To increase the comparability of this study with past research, and to compare assessment of social anxiety with and without avoidance behaviours, this scale was also administered.

Order There were two orders for the questionnaire packages which were randomly distributed to participants for the purpose of counterbalancing. Each order began with the consent form followed by the biographical information form and ended with the trait depression scale followed by the EMAS-P. State measures were placed before trait measures in both orders, and thus were the first two questionnaires in both orders. The remaining questionnaires were placed such that their position and the questionnaires surrounding them would be different in the two orders. Order A: EMAS-S, State

depression. EMAS-T. GESS, SCS, Rosenberg Self-esteem, FSR, Brief-FNE and SAD.

Order B: State depression, EMAS-S, SAD, Rosenberg Self-esteem, EMAS-T, Brief-FNE, SCS, FSR, and GESS. Order effects were not expected.

Procedure

Participants were asked to complete a questionnaire package (which was described in the Materials section above) in a laboratory, in pencil and paper format. Participants were then debriefed and thanked for their participation.

Analyses

Correlational and multiple regression analyses were used. Social anxiety as measured by the EMAS-T social evaluation scale, Social Avoidance and Distress Scale, and the Social Anxiety subscale of the Self-Consciousness Scale served as the criterion variables. Similar results were expected for all three measures of social anxiety. The predictor variables were Generalized Expectancy for Success, Public Self-consciousness, Self-esteem, Fear of Negative Evaluation, and Self-Reinforcement. A regression model was constructed for each measure of social anxiety. Each variable was tested for gender differences: males and females were compared using t-tests, following a multivariate

analysis of variance. The following were expected:

1) a negative correlation between Generalized Expectancy for Success and Social Anxiety.

2) a positive correlation between Public Self-consciousness and Social Anxiety.

3) a negative correlation between Self-esteem and Social Anxiety.

4) a positive correlation between Fear of Negative Evaluation and Social Anxiety.

5) a negative correlation between Frequency of Self-Reinforcement and Social Anxiety.

6) Correlational analyses were conducted with the two rating questions (numbered 8 and 9 on Appendix A) on the Biographical Information Sheet. It was expected that individuals scoring high on social anxiety would rate that they monitor and evaluate their behaviour more frequently (i.e., positive correlations are expected).

7) The Public and Private Self-Consciousness scales of the Self-Consciousness Scale were investigated. Recently, each of these scales has been found to consist of two factors. More importantly, the Private Self-Consciousness scale has been found to consist of a maladaptive component (Self-Reflectiveness) and an adaptive component (Internal State Awareness). A correlational analysis was conducted to further investigate this dichotomy. It was expected that Self-Reflectiveness will directly correlate with social anxiety and fear of negative evaluation (i.e., the maladaptive constructs in this study) and inversely

correlate with self-esteem, expectancy for success, and self-reinforcement (i.e., the adaptive constructs in this study). The opposite pattern was expected for the Internal State Awareness factor. A positive correlation was expected for the relationship between Internal State Awareness and each of self-esteem, expectancy for success, and self-reinforcement. A negative relationship was expected for Internal State Awareness and both social anxiety and fear of negative evaluation.

8) The Fear of Negative Evaluation as a mediator between self-esteem and social anxiety was tested through regression analyses.

Chapter 3

RESULTS

Means, Standard Deviations and Reliabilities for all Measures

Means, standard deviations and alpha reliabilities for measures used in the present study appear in Table 1 (and this information reported separately for men and women can be found in Appendix J, Table 14). The mean for the Social Evaluation scale of the EMAS does not differ from the normative data for undergraduates (Endler et al., 1991). The same holds true for the other two measures of social anxiety (Fenigstein et al., 1975; Watson & Friend, 1969). The means of the remaining scales were also compared with normative undergraduate samples and no mean was found to differ from its respective normative sample (Fenigstein et al., 1975; Fibel & Hale, 1978; Heiby, 1983; Leary, 1983; Spielberger & Ritterband, 1996). The reliabilities of most of the measures in Table 1 are highly acceptable, ranging from .78 to .92. The exception to this statement is the Private Self-Consciousness scale which demonstrated a low reliability of .67. Other researchers have obtained similarly low reliabilities for this subscale (Reeves, Watson, Ramsay, & Morris, 1995). There is presently debate over the factor structure of this scale. The factor structure of the Self-Consciousness Scale will be elaborated on in a later section.

Table 1

Means, Standard Deviations and Reliabilities for the total sample (N = 174; men and women)

| | Mean | SD | Alpha |
|-----------------------------|--------|-------|-------|
| Social Anxiety | | | |
| EMAS-T-SE | 46.10 | 10.93 | .90 |
| SAD | 7.74 | 6.53 | .91 |
| SCS-SA | 12.27 | 5.55 | .81 |
| Public SCS | 18.67 | 5.16 | .78 |
| Private SCS | 24.82 | 5.76 | .67 |
| Goal Setting | 115.34 | 16.55 | .92 |
| Self-Esteem | 31.09 | 5.46 | .89 |
| Self-Reinforcement | 19.43 | 5.28 | .81 |
| Fear of Negative Evaluation | 31.85 | 7.94 | .90 |
| Depression (State) | 18.07 | 5.16 | .84 |

EMAS-T-SE = Endler Multidimensional Anxiety Scales-Trait-Social Evaluation scale

SAD = Social Avoidance and Distress Scale

SCS-SA = Social Anxiety subscale of the Self-Consciousness Scale

Public-SCS = Public Self-Consciousness subscale of the Self-Consciousness Scale

Private-SCS = Private Self-Consciousness subscale of the Self-Consciousness Scale

Goal Setting = Generalized Expectancy for Success Scale

Self-Esteem = Rosenberg Self-Esteem Scale

Self-Reinforcement = Frequency of Self-Reinforcement Scale

Fear of Negative Evaluation = Brief-Fear of Negative Evaluation Scale

Depression (State) = Spielberger State-Trait Depression Inventory - State scale

Tests for Order of Questionnaires

The questionnaire packages were administered in two different orders (see Method section). A multivariate analysis of variance (MANOVA) comparing means for the two different orders on all questionnaires was not significant.

Tests for Gender Differences

The present sample contained significantly more women ($n = 124$; 71 %) than men ($n = 50$; 29 %) and the generalizability of the results of the present study to men and the validity of testing for gender differences are both questionable. A multivariate analysis of variance (MANOVA) comparing means for men and women on the measures used in the present study was not significant [$F(10, 163) = 1.86, p < .06$]. Further investigation of gender differences was carried out because the MANOVA approached significance. Ten independent sample t -tests (using pooled variances to correct for unequal sample size) comparing means of the measures used in the present study were run to check for gender differences. There were no significant differences for gender using a non-conservative alpha of .05. Based on previous research, it was predicted that women would have significantly lower self-esteem than men. This hypothesis was not supported. Because there were no significant gender differences, results will be reported

for the entire ($N = 174$) sample.

Assumptions of Regression Analysis

Preliminary Tests:

The distribution of the Social Avoidance and Distress (SAD) Scale was found to be positively skewed. A square root transformation on this variable was found to correct this violation of the assumption of normality. Therefore, all analyses have been conducted using the transformed SAD variable. All other distributions were found to be normally distributed.

The data set was screened for both univariate and multivariate outliers. To check for univariate outliers, the highest and lowest scores for each variable were converted to standard scores. A score was classified as a univariate outlier if the standard score was calculated to be greater than 3.3. One univariate outlier was found. This outlier had a very high score on the state depression measure. To correct for it, the score was lowered such that it remained the highest score on the depression measure but would no longer be classified as an outlier (as suggested by Tabachnick & Fidell, 1996).

To check for multivariate outliers, all variables were entered into a regression model as independent variables and case number was used as the dependent variable. The

Mahalanobis distances. Cook's test (a measure of influence) and leverage were examined (as outlined in Tabachnick & Fidell, 1996). It was concluded that there were no multivariate outliers based on this investigation.

Bivariate scatter plots between each independent variable and each dependent variable were examined for curvilinear relationships. It was concluded that all of the relationships were of a linear nature. These scatter plots were also examined to check for the assumption of homoscedasticity. Evidence of heteroscedasticity was found in most relationships involving the Social Anxiety subscale of the Self-Consciousness Scale. Square root and logarithmic transformations were performed in an attempt to resolve this violation. These transformations, however, did not correct the heteroscedasticity. Multicollinearity was assessed by examining the conditioning indexes and variance proportions. It was concluded that multicollinearity was not present.

Residual plots:

Further tests of the assumptions of multivariate regression were conducted using the residual plots after the regression models were run. The residual plots provided further evidence of normality and linearity. The residual plots corresponding to regression analyses performed with the Social Anxiety subscale of the Self-Consciousness Scale

showed evidence of heteroscedasticity. The violation of the assumption of homoscedasticity does not invalidate the results: it simply weakens the results and should be kept in mind. Outliers were screened for with each regression analysis. Two outliers were found in Model 1 and one outlier was found in Model 3. These cases were removed for their respective analysis and the analyses were rerun. Finally, examination of the Durbin-Watson statistic for each regression model provided support for the independence of errors of prediction (i.e., assumption of independence of residuals).

Biographical Information Sheet

The sample consisted of 174 undergraduate students, 124 women (71%) and 50 men (29%). Most participants indicated that their occupation was student (64%). The majority of the sample indicated that they made less than \$10,000 (89%). The breakdown of ethnicity was: 48.9% White: 17.8% Asian: 11.5% East Indian: 6.9% Black: 1.7% Hispanic: 1.1% Native: 9.2% other: 2.9% unreported.

Several questions on the Biographical Information Sheet were asked for exploratory purposes. First, descriptive statistics will be provided, followed by an investigation of these variables with social anxiety. Participants were asked to provide their number of siblings. These values ranged from zero to five for the entire sample, with

a mean of 2.6 and a standard deviation of 2.0. Participants were also asked to list any sports and extracurricular activities they participated in as a child (until age 12), as a teenager (age 13-18), and an adult (age 19-present). The number of sports/activities was counted for each subject for each age group. The mean number of activities participated in as a child was 2.63 (SD = 1.77); as a teenager, the mean was 2.55 (SD = 1.67); and as an adult, the mean was 1.70 (SD = 1.48).

Participants were asked to respond to two 10-point scale items (ranging from 1 = seldom to 10 = frequently) as to the extent to which they monitor their own behaviour during social situations and the extent to which they evaluate their own behaviour during social situations. The mean for monitoring was found to be 6.90 (SD = 1.98) and the mean for evaluating was found to be 6.40 (SD = 2.25).

A correlational analysis was carried out in an exploratory fashion, examining the relationship between social anxiety and the variables on the Biographical Information Sheet related to siblings, sports/activities, and the two ten-point scale items (see Table 2). The alpha level was set at .003, following a Bonferroni correction for 18 tests. Correlations are presented for each of the variables with each measure of social anxiety. None of the correlations were significant based on this stringent alpha level. Two correlations approached significance. Both of these included the SAD scale as the

Table 2

Correlations between Social Anxiety and Biographical Information (N = 174)

| | Measures of Social Anxiety | | |
|-----------------------------|----------------------------|------|--------|
| | EMAS-T-SE | SAD | SCS-SA |
| Number of Siblings | .01 | .07 | .06 |
| Number of Sports/Activities | | | |
| As a Child | -.10 | -.15 | -.14 |
| As a teenager | .01 | -.12 | -.13 |
| As an adult | -.03 | -.18 | -.14 |
| Monitor | .10 | .06 | .09 |
| Evaluate | .07 | .02 | .08 |

EMAS-T-SE = Endler Multidimensional Anxiety Scales-Trait-Social Evaluation Scale

SAD = Social Avoidance and Distress Scale

SCS-SA = Social Anxiety subscale of the Self-Consciousness Scale

Monitor = rating of the extent to which behaviour is monitored in social situations

Evaluate = rating of the extent to which behaviour is evaluated in social situations

measure of Social Anxiety and were for the sports/activities questions. The correlation between SAD and the number of sports/activities participated in as a child ($r = -.15$, $p < .05$) and the correlation between SAD and the number of sports/activities participated in as an adult ($r = -.18$, $p < .05$) both approached significance. The effect size for these correlations is very small (i.e., only 2.25 % and 3.24% of the variance is accounted for by these results respectively).

Correlational Analyses

Correlations between all predictor and criterion variables can be found in Table 3 for the total sample. Correlations separately for men and women were quite similar and can be found in Appendix J (Table 15). The alpha level was set at .001 following a Bonferroni correction for 45 tests.

Correlations between Social Anxiety measures: The three social anxiety measures showed moderate to strong correlations¹. The EMAS-T Social Evaluation measure was

¹

Descriptive terms used for correlations in the present study will follow Cohen's (1988) suggestion: The terms large, high or strong will be used to describe correlations greater than .50. Medium or moderate will be used to describe associations that range from .30 to .49. Small or weak or low will be used to describe correlations that range from .10 to .29.

Table 3

Correlation Matrix for all predictor and criterion variables (N = 174: men and women)

| | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. |
|--------------------------------|----|------|------|------|-------|-------|-------|-------|-------|
| 1. EMAS-T-SE | - | .48* | .55* | .15 | -.39* | -.40* | -.33* | .41* | .26* |
| 2. SAD | | - | .75* | .23 | -.54* | -.54* | -.46* | .41* | .44* |
| 3. SCS-SA | | | - | .40* | -.47* | -.42* | -.39* | .45* | .27* |
| 4. Public-SCS | | | | - | -.16 | -.31* | -.35* | .70* | .19 |
| 5. Goal Setting | | | | | - | .60* | .50* | -.24 | -.46* |
| 6. Self-Esteem | | | | | | - | .69* | -.50* | -.60* |
| 7. Self-Reinforcement | | | | | | | - | -.52* | -.50* |
| 8. Fear of Negative Evaluation | | | | | | | | - | .33* |
| 9. State Depression | | | | | | | | | - |

* $p < .001$

EMAS-T-SE = Ender Multidimensional Anxiety Scales-Trait-Social Evaluation scale

SAD = Social Avoidance and Distress Scale

SCS-SA = Social Anxiety subscale of the Self-Consciousness Scale

Public-SCS = Public Self-Consciousness subscale of the Self-Consciousness Scale

Goal Setting = Generalized Expectancy for Success Scale

Self-Esteem = Rosenberg Self-Esteem Scale

Self-Reinforcement = Frequency of Self-Reinforcement Scale

Fear of Negative Evaluation = Brief-Fear of Negative Evaluation Scale

Depression (State) = Spielberger State-Trait Depression Inventory - State scale

moderately correlated with the SAD and the SCS-SA ($r = .48$, $p < .001$, 23 % of the variance accounted for and $r = .55$, $p < .001$, 30 % of the variance accounted for, respectively). The SAD and the SCS-SA were more strongly correlated with each other ($r = .75$, $p < .001$; 56 % of the variance was accounted for).

Correlations between predictor variables: Many of the predictor variables were correlated with each other. Fear of Negative Evaluation was found to be strongly positively correlated with Public Self-Consciousness ($r = .70$, $p < .001$, 49 % of the variance accounted for), and moderately negatively correlated with both self-esteem ($r = -.50$, $p < .001$, 25 % of the variance accounted for) and self-reinforcement ($r = -.52$, $p < .001$, 27 % of the variance accounted for). A priori it was decided to determine if fear of negative evaluation is a mediator between self-esteem and social anxiety. Fear of negative evaluation may also act as a mediator between self-reinforcement and social anxiety. This hypothesis was tested for exploratory purposes. Thus, the fear of negative evaluation was tested as a mediator for the following relationships (i) self-esteem and social anxiety and (ii) self-reinforcement and social anxiety. These results will be reported in a later section.

There were weaker, but significant, negative relationships between public self-consciousness and both self-esteem and self-reinforcement ($r = -.31$, $p < .001$, 10 % of the

variance accounted for and $r = -.35$, $p < .001$, 12 % of the variance accounted for, respectively). There were moderate to strong positive relationships between goal setting and both self-esteem ($r = .60$, $p < .001$, 36 % of the variance accounted for) and self-reinforcement ($r = .50$, $p < .001$, 25 % of the variance accounted for). Finally there was a strong positive relationship between self-reinforcement and self-esteem ($r = .69$, $p < .001$, 48 % of the variance accounted for).

Hypothesis 1. Goal Setting: It was hypothesized that there would be a negative correlation between expectancy for success and social anxiety. This relationship was found for all three measures of Social Anxiety (EMAS-T-SE: $r = -.39$, $p < .0001$; SAD: $r = -.54$, $p < .0001$; SCS-SA: $r = -.47$, $p < .0001$) and 15 to 29 % of the variance was accounted for.

Hypothesis 2. Self-Monitoring: A positive relationship between the Public Self-Consciousness scale and social anxiety was predicted. The only significant correlation was with the Social Anxiety subscale of the Self-Consciousness Scale ($r = .40$, $p < .0001$, accounting for 16 % of the variance). Hypotheses were also made with respect to the Private Self-Consciousness Scale which will be discussed in a later section.

Hypothesis 3. Self-Evaluation: A negative relationship between self-esteem and social anxiety was expected. This result was supported by moderate correlations with each of the three measures of social anxiety (EMAS-T-SE: $r = -.40$, $p < .0001$; SAD: $r = -.54$, $p < .0001$; SCS-SA: $r = -.42$, $p < .0001$) and 16 to 29 % of the variance was accounted for.

Hypothesis 4. Fear of Negative Evaluation: A positive relationship was expected between fear of negative evaluation and social anxiety. This moderate relationship was found for all three measures of social anxiety (EMAS-T-SE: $r = .41$, $p < .0001$; SAD: $r = .41$, $p < .0001$; SCS-SA: $r = .45$, $p < .0001$) and 17 to 20 % of the variance was accounted for.

Hypothesis 5. Self-Reinforcement: A negative moderate relationship between the frequency of self-reinforcement and social anxiety was expected and supported with each measure of social anxiety (EMAS-T-SE: $r = -.33$, $p < .0001$; SAD: $r = -.46$, $p < .0001$; SCS-SA: $r = -.39$, $p < .0001$) and 11 to 21 % of the variance was accounted for.

Hypothesis 6. Frequency of Self-Monitoring and Self-Evaluation: Frequency of self-monitoring and self-evaluation were reported on in the Biographical Information Sheet section. The hypothesis was not supported, that is, frequency of self-monitoring and self-

evaluation were not found to be correlated with social anxiety.

Social Anxiety and Depression: State depression was found to be correlated with all three measures of social anxiety. The correlation between state depression and SAD was moderate ($r = .44, p < .001$), whereas the relationships between depression and EMAS-T-SE and SCS-SA were weaker ($r = .26, p < .001$ and $r = .27, p < .001$ respectively). Depending on the measure of social anxiety, 7 to 19 % of the variance was accounted for.

Correlational analyses revealed a similar pattern of relationships between state depression and the measures of self-regulation as was found for social anxiety. More specifically, state depression was negatively correlated with goal setting ($r = -.46, p < .001, 21\%$ of the variance accounted for), self esteem ($r = -.60, p < .001, 36\%$ of the variance accounted for), and self-reinforcement ($r = -.50, p < .001, 25\%$ of the variance accounted for). Additionally, depression was positively correlated with fear of negative evaluation ($r = .33, p < .001, 11\%$ of the variance accounted for). Finally, the relationship between depression and public self-consciousness was not significant.

Multiple Regression Analyses

All three models had socially based anxiety as the criterion variable: each with a different

dependent measure. The criterion for Model 1 is the Social Evaluation Trait Anxiety scale of the EMAS. The criterion for Model 2 is the Social Avoidance and Distress Scale. The criterion for Model 3 is the Social Anxiety subscale of the Self-Consciousness Scale. The initial regression run consisted of the following independent (predictor) variables for all three models: Generalized Expectancy for Success (GESS), Public Self-Consciousness, Self-Esteem, Self-Reinforcement, Fear of Negative Evaluation and Depression (state). Standard multiple regression analyses were carried out. In other words, all independent variables entered the regression model simultaneously. Because of the comorbidity between depression and social anxiety and not knowing which factor is responsible for effects, depression was entered into the model to determine if it is a significant predictor. Depression did not emerge as a significant predictor for any of the models and therefore it was removed in the second run of each regression model. All models were for men and women combined.

Model 1 - Predicting EMAS-Trait-Social Evaluation Anxiety: Several variables were found to be nonsignificant in the initial run and were removed from the model. Depression, Self-Reinforcement, and Self-Esteem were all removed. The significant independent variables were Fear of Negative Evaluation, Generalized Expectancy for

Success, and Public Self-Consciousness [$R^2 = .33$; $F(3, 168) = 27.99$, $p < .0001$]. Results from the second run are presented in Table 4. Fear of Negative Evaluation was positively related to social anxiety [$t(3, 171) = 6.33$, $p < .0001$], and Generalized Expectancy for Success and Public Self-Consciousness were both negatively related to social anxiety in this model [$t(3, 171) = -4.84$, $p < .0001$ and $t(3, 171) = -3.17$, $p < .01$ respectively].

Model 2: Predicting Social Avoidance and Distress (SAD): Depression, Self-

Reinforcement, and Public Self-Consciousness were all found to be nonsignificant and this regression model was rerun without these predictors. Generalized expectancy for success, fear of negative evaluation and self-esteem were found to be significant predictors of social anxiety as measured by the SAD. The trimmed model, which appears in Table 5, yielded an R^2 of .40 [$F(3, 170) = 37.30$, $p < .0001$]. Generalized expectancy for success and self-esteem were both negatively related to the criterion variable [$t(173) = -4.78$, $p < .0001$ and $t(173) = -2.47$, $p < .05$ respectively], while fear of negative evaluation was positively related to social anxiety [$t(173) = 3.25$, $p < .001$].

Model 3: Predicting Social Anxiety (SCS): Depression, self-reinforcement, and self-

Table 4

Multiple Regression Model 1: Predicting EMAS-Social Evaluation Trait Anxiety
(N = 174: men and women combined)

| <u>Analysis of Variance</u> | | | | |
|-----------------------------|-----|---------|-------|-------|
| Source | df | MS | F | p |
| Between | 3 | 2137.66 | 27.99 | .0001 |
| Within | 168 | 76.37 | | |
| Total | 171 | | | |

R-square 0.33
Adjusted R-square 0.32

| <u>Parameter Estimates</u> | | | | | | |
|----------------------------|----|-------|------|------|-------|-------|
| Variable | df | B | SE | Beta | t | p |
| Intercept | 1 | 56.04 | 6.11 | | 9.17 | .0001 |
| GESS | 1 | -.20 | -.31 | -.31 | -4.84 | .0001 |
| SCS-PU | 1 | -.57 | .18 | -.28 | 3.17 | .002 |
| FNE | 1 | .76 | .12 | .57 | 6.33 | .0001 |

EMAS = Endler Multidimensional Anxiety Scales
 GESS = Generalized Expectancy for Success Scale (Goal Setting)
 SCS-PU = Public Self-Consciousness subscale (Self-Monitoring)
 FNE = Brief - Fear of Negative Evaluation Scale

Table 5

Multiple Regression Model 2: Predicting Social Avoidance and Distress (SAD)
(N = 174: men and women combined)

| <u>Analysis of Variance</u> | | | | |
|-----------------------------|-----|-------|-------|-------|
| Source | df | MS | F | p |
| Between | 3 | 38.58 | 37.30 | .0001 |
| Within | 170 | 1.03 | | |
| Total | 173 | | | |

R-square 0.40
Adjusted R-square 0.39

| <u>Parameter Estimates</u> | | | | | | |
|----------------------------|----|-------|-----|------|-------|-------|
| Variable | df | B | SE | Beta | t | p |
| Intercept | 1 | 6.08 | .81 | | 7.50 | .0001 |
| GESS | 1 | -2.81 | .01 | -.36 | -4.78 | .0001 |
| FNE | 1 | 3.67 | .01 | .22 | 3.25 | .001 |
| RSE | 1 | -4.95 | .02 | -.21 | -2.47 | .015 |

GESS = Generalized Expectancy for Success Scale
FNE = Brief - Fear of Negative Evaluation
RSE = Rosenberg Self-Esteem

esteem were all removed after the initial regression run. Expectancy for success and fear of negative evaluation were found to be significant predictors. The trimmed model had an R square of .38 and is presented in Table 6. Expectancy for success was found to be negatively related to social anxiety [$t(172) = -6.27, p < .0001$] and fear of negative evaluation was found to be positively related to social anxiety [$t(172) = 3.05, p < .01$]. Public self-consciousness was not a significant predictor, however, this variable approached significance and was therefore left in the model [$t(172) = 1.93, p < .06$].

Hypothesis 7. Self-Consciousness Scale (SCS):

Correlations for factors of the Self-Consciousness Subscales with variables in the present study appear in Table 7. The alpha level was set at .002 following a Bonferroni correction for 28 tests. The Private Self-Consciousness Scale has been proposed to consist of two factors, Self-Reflectiveness (alpha = .69) and Internal State Awareness (alpha = .53). The Public Self-Consciousness Scale has also been proposed to consist of two separate factors, Style Consciousness (alpha = .78) and Appearance Consciousness (alpha = .54). Generally speaking the reliabilities of these subscales was found to be low. This was especially true of the Private SCS subscales.

The Self-Reflectiveness component of the Private SCS was found to be positively correlated with maladaptive constructs in the present study. Self-Reflectiveness was

Table 6

Multiple Regression Model 3: Predicting Social Anxiety (SCS)
(N = 174: men and women combined)

| <u>Analysis of Variance</u> | | | | | | |
|-----------------------------|-----|--------|-------|-------|--|--|
| Source | df | MS | F | p | | |
| Between | 3 | 652.85 | 34.37 | .0001 | | |
| Within | 169 | 19.00 | | | | |
| Total | 172 | | | | | |

| | | | | | | |
|-------------------|------|--|--|--|--|--|
| R-square | 0.37 | | | | | |
| Adjusted R-square | 0.36 | | | | | |

| <u>Parameter Estimates</u> | | | | | | |
|----------------------------|----|-------|------|------|-------|-------|
| Variable | df | B | SE | Beta | t | p |
| Intercept | 1 | 18.21 | 3.05 | | 5.98 | .0001 |
| GESS | 1 | -.13 | .02 | -.39 | -6.27 | .0001 |
| FNE | 1 | -.18 | .06 | .26 | 3.05 | .003 |
| SCS-PU | 1 | .17 | .09 | .16 | 1.93 | .06 |

SCS = Self-Consciousness Scale

GESS = Generalized Expectancy for Success Scale

FNE = Fear of Negative Evaluation

SCS-PU = Public Self-Consciousness scale

Table 7

Correlations between Self-Consciousness Subscales and variables in the present study
(N = 174; men and women combined)

| | Private SCS | | Public SCS | |
|-----------------------------|-----------------------------|-------------------------|------------------------|-----------------------------|
| | Internal State Awareness | Self- Reflectiveness | Style Consciousness | Appearance Consciousness |
| Social Anxiety | | | | |
| EMAS-T-SE | -.09 | .29* | .23 | .00 |
| SAD | -.23 | .34* | .29* | .08 |
| SCS-SA | -.09 | .38* | .43* | .24* |
| Depression (State) | -.21 | .26* | .23 | .09 |
| Goal Setting | .34* | -.35* | -.23 | -.02 |
| Self-Esteem | .31* | -.29* | -.38* | -.12 |
| Self-Reinforcement | .26* | -.26* | -.40* | -.18 |
| Fear of Negative Evaluation | .07 | .44* | .73* | .46* |

* $p < .002$

EMAS-T-SE = Endler Multidimensional Anxiety Scales-Trait-Social Evaluation scale

SAD = Social Avoidance and Distress Scale

SCS-SA = Social Anxiety subscale of the Self-Consciousness Scale

Public-SCS = Public Self-Consciousness subscale of the Self-Consciousness Scale

Private-SCS = Private Self-Consciousness subscale of the Self-Consciousness Scale

Goal Setting = Generalized Expectancy for Success Scale

Self-Esteem = Rosenberg Self-Esteem Scale

Self-Reinforcement = Frequency of Self-Reinforcement Scale

Fear of Negative Evaluation = Brief-Fear of Negative Evaluation Scale

Depression (State) = Spielberger State-Trait Depression Inventory - State scale

found to be positively correlated with each of the measures of social anxiety (EMAS-T-SE: $r = .29$, $p < .002$; SAD: $r = .34$, $p < .002$; SCS-SA: $r = .38$, $p < .002$). Self-Reflectiveness was also positively correlated with Fear of Negative Evaluation ($r = .44$, $p < .002$) and state Depression ($r = .26$, $p < .002$). Self-Reflectiveness was found to be negatively correlated with the adaptive constructs in the present study. There was a negative relationship between self-reflectiveness and each of the goal setting ($r = -.35$, $p < .002$), self-esteem ($r = -.29$, $p < .002$), and self-reinforcement ($r = -.26$, $p < .002$) variables. The Internal State Awareness factor, for the most part showed opposite relationships, only a few of which were significant. Internal State Awareness was positively correlated with the three adaptive constructs that the Self-Reflectiveness factor was negatively correlated with. These are goal setting ($r = .34$, $p < .002$), self-esteem ($r = .26$, $p < .002$) and self-reinforcement ($r = .26$, $p < .002$). The Private Self-Consciousness Scale as a whole only was correlated with two other measures in the present study. Private Self-Consciousness was found to be positively correlated with both Public Self-Consciousness ($r = .48$, $p < .0001$) and Fear of Negative Evaluation ($r = .36$, $p < .0001$).

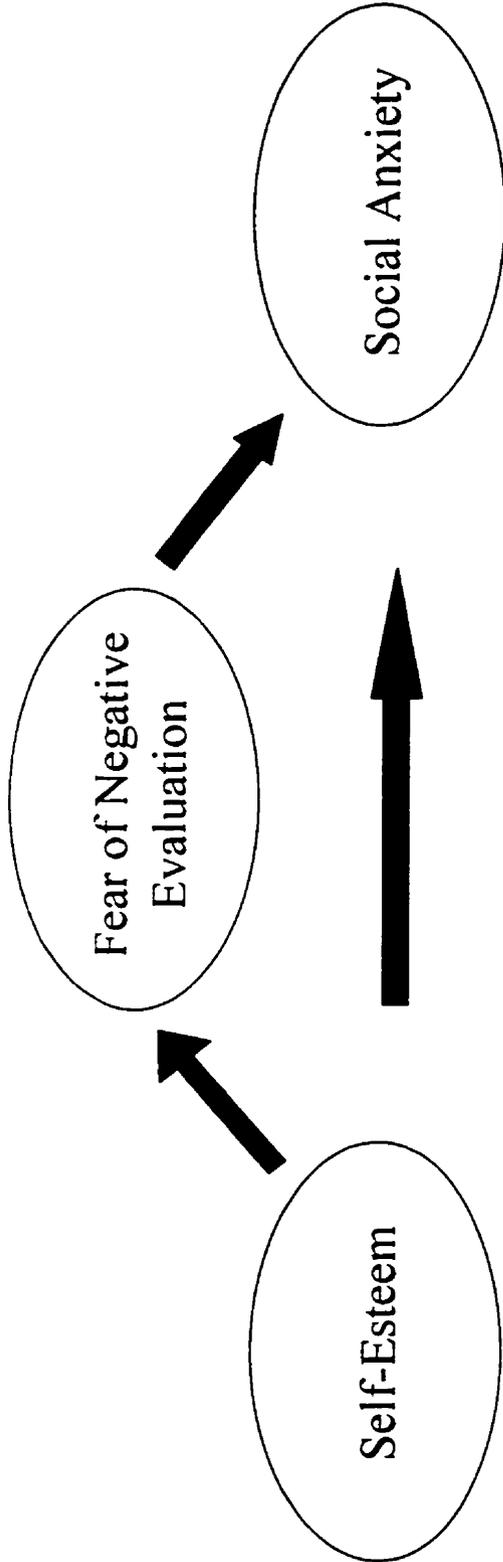
Unlike the Private Self-Consciousness factors, the Public Self-Consciousness factors were found to be related to other measures in a similar fashion, although there were differences in which correlations reached significance. Style Consciousness and

Appearance Consciousness both only negatively correlated with adaptive constructs and positively correlated with maladaptive constructs. Style Consciousness was positively correlated with two of the three measures of social anxiety (SAD: $r = .29$, $p < .002$; SCS-SA: $r = .43$, $p < .002$), but Appearance Consciousness only showed a weak relationship with the Social Anxiety subscale from the Self-Consciousness Scale (SCS-SA, $r = .24$, $p < .002$). Style Consciousness showed a strong positive correlation and Appearance Consciousness showed a moderate correlation with Fear of Negative Evaluation ($r = .73$, $p < .002$ and $r = .46$, $p < .002$ respectively). Additionally, Style Consciousness displayed moderate negative relationships with both self-esteem ($r = -.38$, $p < .002$) and self-reinforcement ($r = -.40$, $p < .002$).

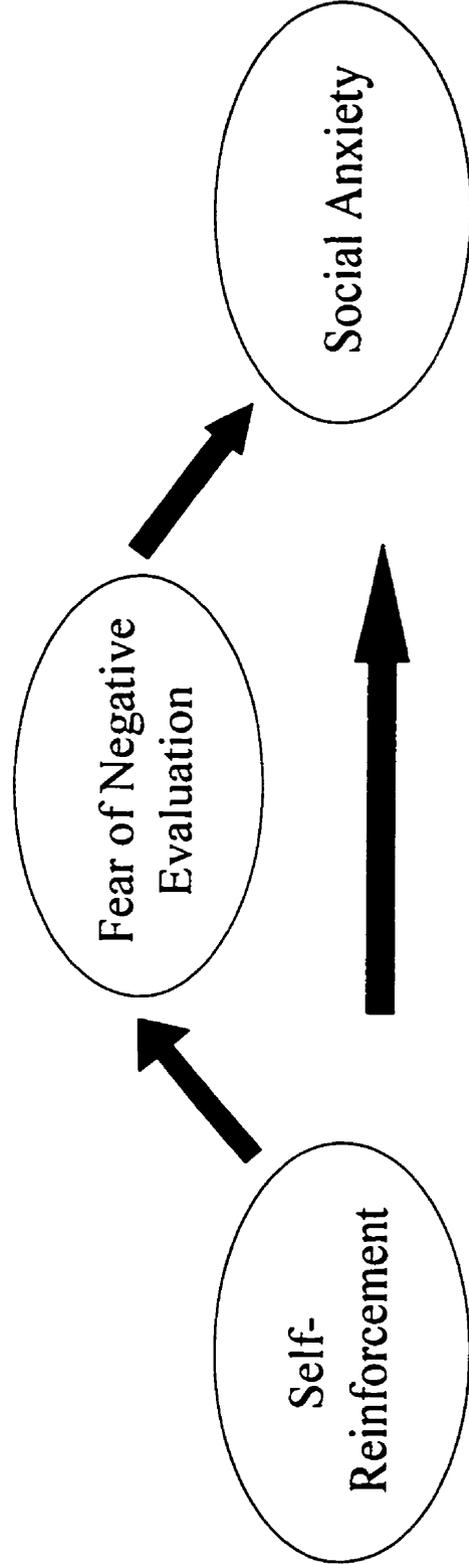
Testing Mediational Relationships

The fear of negative evaluation was tested as a mediator between self-esteem and social anxiety (as was hypothesized) and as well between self-reinforcement and social anxiety (for exploratory purposes). It was sought to determine: 1) if the negative relationship between self-esteem and social anxiety could be accounted for by fear of negative evaluation, and 2) if the negative relationship between self-reinforcement and social anxiety could be accounted for by fear of negative evaluation (see Figure 1).

Figure 1. Mediation Models



(a) Fear of negative evaluation as a mediator between self-esteem and social anxiety



(b) Fear of negative evaluation as a mediator between self-reinforcement and social anxiety

Hypothesis 8. Mediation Test 1: Fear of negative evaluation as a mediator between self-esteem and social anxiety: The Fear of Negative Evaluation as a mediator between self-esteem and social anxiety was tested to determine if the negative relationship between self-esteem and social anxiety could be accounted for by fear of negative evaluation. This was tested with all three measures of social anxiety separately. All yielded similar results. therefore only the results involving the EMAS Trait Social Evaluation Anxiety measure will be reported. To test for the mediational effect, the following regression equations were evaluated (as outlined in Baron & Kenny, 1986):

- i) The fear of negative evaluation was predicted from self-esteem. This regression model appears in Table 8.
- ii) Social anxiety was predicted from self-esteem. This regression model appears in Table 9.
- iii) Social anxiety was predicted from both self-esteem and fear of negative evaluation. This regression model appears in Table 10.

To establish mediation, self-esteem must affect fear of negative evaluation, self-esteem must affect social anxiety, and fear of negative evaluation must affect social anxiety. If fear of negative evaluation is a perfect mediator, then self-esteem will have no effect when fear of negative evaluation is controlled for. It is more reasonable to expect a

Table 8

Testing fear of negative evaluation as a mediator between self-esteem and social anxiety:
Regression Model 1: Predicting Fear of Negative Evaluation (FNE)
 (N = 174: men and women combined)

| <u>Analysis of Variance</u> | | | | |
|-----------------------------|-----|---------|-------|-------|
| Source | df | MS | F | p |
| Between | 1 | 2735.56 | 57.60 | .0001 |
| Within | 172 | 47.49 | | |
| Total | 173 | | | |

R-square 0.25
 Adjusted R-square 0.25

| <u>Parameter Estimates</u> | | | | | | |
|----------------------------|----|-------|------|-------|-------|-------|
| Variable | df | B | SE | Beta | t | p |
| Intercept | 1 | 54.51 | 3.03 | | 17.98 | .0001 |
| Self-Esteem | 1 | -.73 | .09 | -.501 | -7.59 | .0001 |

FNE = Brief Fear of Negative Evaluation Scale
 Self-Esteem = Rosenberg Self-Esteem Scale

Table 9

Testing fear of negative evaluation as a mediator between self-esteem and social anxiety:
Regression Model 2: Predicting Social Anxiety (EMAS-T-SE)
(N = 174: men and women combined)

| <u>Analysis of Variance</u> | | | | |
|-----------------------------|-----|---------|-------|-------|
| Source | df | MS | F | p |
| Between | 1 | 3264.64 | 32.25 | .0001 |
| Within | 172 | 101.22 | | |
| Total | 173 | | | |

R-square 0.16
Adjusted R-square 0.15

| <u>Parameter Estimates</u> | | | | | | |
|----------------------------|----|-------|------|-------|-------|-------|
| Variable | df | B | SE | Beta | t | p |
| Intercept | 1 | 70.85 | 4.43 | | 16.01 | .0001 |
| Self-Esteem | 1 | -.80 | .14 | -.397 | -5.68 | .0001 |

EMAS-T-SE = Endler Multidimensional Anxiety Scales-Social Evaluation Trait Anxiety
Self-Esteem = Rosenberg Self-Esteem Scale

Table 10

Testing fear of negative evaluation as a mediator between self-esteem and social anxiety:
Regression Model 3: Predicting Social Anxiety (EMAS-T-SE)
 (N = 174: men and women combined)

| <u>Analysis of Variance</u> | | | | | | |
|-----------------------------|-----|---------|-------|-------|--|--|
| Source | df | MS | F | p | | |
| Between | 2 | 2217.95 | 23.35 | .0001 | | |
| Within | 171 | 94.97 | | | | |
| Total | 173 | | | | | |

| | |
|-------------------|------|
| R-square | 0.22 |
| Adjusted R-square | 0.21 |

| <u>Parameter Estimates</u> | | | | | | |
|-----------------------------|----|-------|------|-------|-------|-------|
| Variable | df | B | SE | Beta | t | p |
| Intercept | 1 | 50.21 | 7.27 | | 6.90 | .0001 |
| Self-Esteem | 1 | -.52 | .16 | -.260 | -3.32 | .001 |
| Fear of Negative Evaluation | 1 | .38 | .11 | .275 | 3.51 | .001 |

EMAS-T-SE = Ender Multidimensional Anxiety Scales-Social Evaluation Trait Anxiety
 Self-Esteem = Rosenberg Self-Esteem Scale
 FNE = Brief Fear of Negative Evaluation Scale

decrease in the effect of self-esteem on social anxiety in the third regression equation compared to the second which would be evidence of the mediating effects of fear of negative evaluation (rather than acting as a perfect mediator).

As is evident in Table 8, self-esteem is a significant predictor of fear of negative evaluation [$R^2 = .25$, $F(1,172) = 57.60$, $p < .0001$]. Thus the first criterion in establishing mediation has been met. The next step is to determine if self-esteem is a significant predictor of social anxiety. Once again, this model appears in Table 9. Self-esteem is a significant predictor of social anxiety [$R^2 = .16$, $F(1,172) = 32.35$, $p < .0001$], thus the second criterion has also been met. Next, in the third regression model, fear of negative evaluation must be a significant predictor of social anxiety and it is [$t(172) = 3.51$, $p < .001$; see Table 10]. Finally, the effect of self-esteem on social anxiety must be less in the third regression model (Table 10) than in the second regression model (Table 9). In the third regression model, the effect of self-esteem on social anxiety [$t(172) = -3.32$, $p < .001$] is less than it is in the second regression model [$t(173) = -5.68$, $p < .0001$]. Based on these regression analyses, one can conclude that fear of negative evaluation is a mediator between self-esteem and social anxiety.

Mediation Test 2: The fear of negative evaluation as a mediator between self-reinforcement and social anxiety: The fear of negative evaluation as a mediator between self-reinforcement and social anxiety was tested to determine if the negative relationship between self-reinforcement and social anxiety could be accounted for by fear of negative evaluation. As with the previous mediational test, separate analyses were performed for each measure of social anxiety and all yielded similar results, therefore only the results of the tests involving the EMAS Trait Social Evaluation Anxiety measure will be reported. The first regression model appears in Table 11. Self-reinforcement is a significant predictor of social anxiety [$F(1,172) = 64.43, p < .0001$]. Thus, the first criterion in the test of this mediational hypothesis has been met. The second regression model appears in Table 12. Self-Reinforcement is a significant predictor of fear of negative evaluation [$F(1,172) = 20.37, p < .0001$]. Thus, the second criterion in the test of this mediational hypothesis has also been met. The third model includes both fear of negative evaluation and self-reinforcement as predictors and social anxiety as the dependent variable. This model is significant and appears in Table 13 [$F(2, 171) = 19.01, p < .0001$]. Fear of negative evaluation is a significant predictor of social anxiety [$t(172) = 3.97, p < .0001$]. Thus, the third criterion in the test of this mediational hypothesis has been met. Finally, the effect of self-reinforcement decreases from the second model [$t(173) = -4.51, p <$

Table 11

Testing fear of negative evaluation as a mediator between self-reinforcement and social anxiety: Regression Model 1: Predicting Fear of Negative Evaluation (FNE)
(N = 174: men and women combined)

| <u>Analysis of Variance</u> | | | | |
|-----------------------------|-----|---------|-------|-------|
| Source | df | MS | F | p |
| Between | 1 | 2971.49 | 64.43 | .0001 |
| Within | 172 | 46.12 | | |
| Total | 173 | | | |

R-square 0.27
Adjusted R-square 0.27

| <u>Parameter Estimates</u> | | | | | | |
|----------------------------|----|-------|------|-------|-------|-------|
| Variable | df | B | SE | Beta | t | p |
| Intercept | 1 | 47.11 | 1.97 | | 23.92 | .0001 |
| Self-Reinforcement | 1 | -.79 | .10 | -.522 | -8.03 | .0001 |

Self-Reinforcement = Frequency of Self-Reinforcement Scale
FNE = Brief Fear of Negative Evaluation Scale

Table 12

Testing fear of negative evaluation as a mediator between self-reinforcement and social anxiety: Regression Model 2: Predicting Social Anxiety (EMAS-T-SE)
(N = 174: men and women combined)

| <u>Analysis of Variance</u> | | | | |
|-----------------------------|-----|---------|-------|-------|
| Source | df | MS | F | p |
| Between | 1 | 2189.67 | 20.37 | .0001 |
| Within | 172 | 107.48 | | |
| Total | 173 | | | |

R-square 0.11
Adjusted R-square 0.10

| <u>Parameter Estimates</u> | | | | | | |
|----------------------------|----|-------|------|-------|-------|-------|
| Variable | df | B | SE | Beta | t | p |
| Intercept | 1 | 59.19 | 3.00 | | 19.69 | .0001 |
| Self-Reinforcement | 1 | -.67 | .15 | -.325 | -4.41 | .0001 |

Self-Reinforcement = Frequency of Self-Reinforcement Scale
FNE = Brief Fear of Negative Evaluation Scale

Table 13

Testing fear of negative evaluation as a mediator between self-reinforcement and social anxiety: Regression Model 3: Predicting Social Anxiety (EMAS-T-SE)
(N = 174: men and women combined)

| <u>Analysis of Variance</u> | | | | |
|-----------------------------|-----|---------|-------|-------|
| Source | df | MS | F | p |
| Between | 2 | 1880.59 | 19.01 | .0001 |
| Within | 171 | 98.91 | | |
| Total | 173 | | | |

R-square 0.18
Adjusted R-square 0.17

| <u>Parameter Estimates</u> | | | | | | |
|-----------------------------|----|-------|------|-------|-------|-------|
| Variable | df | B | SE | Beta | t | p |
| Intercept | 1 | 38.23 | 6.00 | | 6.37 | .0001 |
| Self-Reinforcement | 1 | -.33 | .17 | -.157 | -1.93 | .055 |
| Fear of Negative Evaluation | 1 | .45 | .11 | .323 | 3.99 | .000 |

EMAS-T-SE = Endler Multidimensional Anxiety Scales-Trait-Social Evaluation scale
Self-Reinforcement = Frequency of Self-Reinforcement Scale
FNE = Brief Fear of Negative Evaluation Scale.

0001] to the third model [$t(172) = -1.93, p < .06$]. In fact, in the third model, self-reinforcement is not a significant predictor of social anxiety. Taken all together, the results of these regression analyses provide evidence that fear of negative evaluation is a (complete) mediator between self-reinforcement and social anxiety.

Avoidance and other Behaviors in the Assessment of Social Anxiety

Regression analyses differed depending on which of the three measures of social anxiety was the dependent variable. Further analyses were conducted to investigate whether results differ depending on the inclusion of behaviors in the assessment of social anxiety.

Separate regression analyses were done on the avoidance component and on the social distress component. The final regression models contained the same significant predictors as in the model predicting the total scale. Results did not differ for the social distress and social avoidance components.

There was, however, one difference between the social avoidance and social distress components with respect to depression. The present study assessed both state and trait depression. Initially, state depression was put into the regression models to statistically control for depression. The models were then re-run with trait depression

entered as an independent variable rather than state depression. In the models that have already been reported state depression was not significant. Trait depression was not a significant predictor in the models predicting social anxiety as measured by the EMAS or the SCS (the scales that do not assess avoidance as part of social anxiety). Trait depression was, however, a significant predictor in the model predicting SAD [$F(3, 170) = 39.86, p < .01; t = 3.30, p < .001$]. The SAD was then split into its distress and avoidance components, and the regression was re-run with each new criterion variable. Trait depression was a significant predictor for the model in which the criterion variable only consisted of the avoidance items [$F(3, 170) = 32.36, p < .001; t = 3.90, p < .001$] but not for the model in which the criterion variable only consisted of the distress items.

Exploratory Tests for Interactions

No predictions were made with respect to interactions (or moderating variables). All two-way linear interactions were tested in an exploratory fashion among the following variables: goal setting, public self-consciousness, self-esteem, self-reinforcement, and fear of negative evaluation. All two-way interactions resulted in a total of 10 tests for interactions.

It is desirable that a moderator variable be uncorrelated with both the independent

and dependent variables (Baron & Kenny, 1986). Most of the independent variables in the present study were significantly correlated with each other and with social anxiety (the dependent variable). Due to problems associated with multicollinearity in the testing of interactions, all of the independent variables were centered (i.e., scores were transformed into deviation scores by subtracting the mean from each score) before creating the product term.

All 10 interactions were entered into the regression model predicting social anxiety (as measured by the EMAS). Goal setting, fear of negative evaluation, and public self-consciousness (main effects) remained as the only significant predictors. None of the interactions added unique variance to the prediction of social anxiety.

Further testing of interactions was carried out as suggested by Baron and Kenny (1986). Ten regression models predicting social anxiety (as measured by the EMAS) were run (i.e., one for each interaction). Each contained three predictors: the two independent variables (main effects: e.g., self-esteem and self-reinforcement) and their interaction (product term: e.g., self-esteem X self-reinforcement). A Bonferroni correction for 10 tests yielded an alpha of .005. None of the interactions were significant at this conservative level².

²

Two interactions were significant prior to the Bonferroni correction and will be described

Summary of Results

Correlational analyses revealed support for the hypotheses regarding goal setting, self-evaluation, and self-reinforcement. There was a negative relationship between social anxiety and each of expectancy for success (the measure related to goal setting), self-evaluation and self-reinforcement. There was a positive relationship between social anxiety and fear of negative evaluation. Results regarding self-monitoring were equivocal in that public self-consciousness was only found to be correlated (positively) with one measure of social anxiety.

Multiple regression analyses based on a self-regulation model of social anxiety differed slightly depending on which measure of social anxiety was the dependent variable. Expectancy for success (goal setting) and fear of negative evaluation

for the purpose of being investigated in any future research. Frequency of self-reinforcement interacted with public self-consciousness [$F(3, 170) = 8.58, p < .001; t_{\text{interaction}} = 2.17, p < .05$]. The interaction was such that people who were high in frequency of self-reinforcement and low in public self-consciousness were lower on social anxiety. Frequency of self-reinforcement acted as a moderator variable. The effect of public self-consciousness on social anxiety was dependent on the level of frequency of self-reinforcement. Fear of negative evaluation also interacted with public self-consciousness [$F(3, 170) = 17.37, p < .001; t_{\text{interaction}} = -2.78, p < .01$]. This interaction was such that people who were high in fear of negative evaluation and high in public self-consciousness were found to be higher on social anxiety. Fear of negative evaluation acted as a moderator variable. Effect of public self-consciousness on social anxiety was dependent upon the level of fear of negative evaluation.

consistently emerged as significant predictors. The scale assessing avoidance as part of social anxiety (the SAD) was split into its social distress and social avoidance components. It was concluded that differences in these analyses could not be attributed to the inclusion of avoidance behaviours. One result could be attributed to the inclusion of avoidance in the assessment of social anxiety: Trait depression was found to be a significant predictor of avoidance but not distress.

The factors of the Private and Public Self-Consciousness Scale were correlated with other measures in this study. The Private SCS factor Self-Reflectiveness correlated positively with maladaptive constructs and negatively with adaptive constructs, while the other factor, Internal State Awareness showed opposite relationships. The Public SCS factors displayed similar relationships with other constructs.

Support was found for two mediational relationships. As hypothesized, fear of negative evaluation was found to be a mediator between self-esteem and social anxiety. Fear of negative evaluation was also found to be a mediator between self-reinforcement and social anxiety.

Chapter 4

DISCUSSION

The following discussion begins with a brief look at the reliabilities of the scales. Next, the theory of self-regulation is reviewed, followed by a look at the relationships between each of goal setting, self-monitoring, self-evaluation and self-reinforcement (i.e., the elements of self-regulation) with social anxiety. The mediational relationships involving fear of negative evaluation will then be reviewed. The ability of the various components of self-regulation as predictors of social anxiety will then be discussed. This will be followed by a look at the assessment of social anxiety and whether avoidance behaviours should be included in measures of social anxiety. Next, depression and social anxiety will be compared followed, by a look at the structure of the Self-Consciousness scale. Finally, limitations and directions for future research will be offered.

Alpha Reliabilities

The internal consistencies of most of the measures used in the present study were generally quite high (α ranged from .78 to .91). The only scale to demonstrate a low reliability was the Private Self-Consciousness subscale ($\alpha = .67$). Other researchers have

obtained similarly low reliabilities for this subscale (Reeves et al., 1995). We had not planned to use this measure in the regression analyses but it was used in the correlational analysis of the Self-Consciousness scale which will be discussed later on in the discussion.

Self-Regulation

Self-Regulation is a theory of human behaviour that involves setting goals, monitoring behavior and evaluating behaviour to determine if goals have been achieved (Carver & Scheier, 1986; Endler & Kocovski, in press; Kanfer, 1970). If actual behaviour is discrepant from one's goals, an attempt is made to reduce the discrepancy. The final element in self-regulation is the reinforcement of behaviour which can take the form of an enjoyed activity or can simply involve thinking positive thoughts.

The present study sought to determine which, if any, of these elements of the process of self-regulation contribute to social anxiety, and whether this theory of human behaviour can explain the experience of social anxiety. Each of these elements (goal setting, self-monitoring, self-evaluation, and self-reinforcement) and their relationship to social anxiety will be discussed separately, followed by a section that discusses self-regulation as a whole and its relationship to social anxiety.

Goal Setting

The first element of self-regulation is goal setting. Research has shown that the actual goal setting behaviour of socially anxious individuals is no different from normal controls (Doerfler & Aron, 1995; Wallace & Alden, 1991). Theories of social anxiety have argued that socially anxious individuals believe that others have high standards for them to meet (Rehm, 1977; Schlenker & Leary, 1982). The belief that others have high standards for one to meet is known as Socially Prescribed Perfectionism (Hewitt & Flett, 1991). Individuals who are higher on social anxiety have been found to be higher on Socially Prescribed Perfectionism (Wallace & Alden, 1991). Research which has investigated actual objective ratings has, however, shown that socially anxious individuals do not differ from normal participants in their ratings of the expectations of others (Wallace & Alden).

Other research in the area of goal setting has shown that socially anxious individuals do not expect to achieve their goals (Doerfler & Aron, 1995). The present study supports this research finding. As predicted, there was a moderate negative relationship between social anxiety and generalized expectancy for success (r ranged from $-.39$ to $-.54$). Individuals who were higher on social anxiety were lower on the

expectancy to achieve goals. Socially anxious individuals may set goals that are comparable to nonanxious individuals, but may differ in their expectancy to achieve the goals that they have set. Evidence for the importance of this variable was found in the regression analyses. Expectancy for success consistently emerged as a significant predictor of social anxiety.

The present study looked at a generalized expectancy to attain goals. The present results are consistent with other research that has investigated expectancy for success specific to social situations (Cacioppo et al., 1979; Cheek & Buss, 1981; Clark & Arkowitz, 1975; Pilkonis, 1977). In these studies, socially anxious individuals have had doubts regarding their social competence. The present study extends the lack of an expectancy for success in social interactions to other areas.

Self-Monitoring

The relationship between self-monitoring and social anxiety is difficult to interpret. Snyder's (1974, 1986, 1987) conceptualization of the self-monitoring construct indicates that an individual who is higher on self-monitoring would be more effective in social interaction situations. Social anxiety has, however, been found to be positively correlated with four of the five subscales of Snyder's (1974) Self-Monitoring Scale (Lennox & Wolfe, 1984). Snyder (1987) stated that, "There are differences in the extent

to which people monitor (observe, regulate, and control) the public appearances of self they display in social situations and interpersonal relationships” (p. 7). In the self-regulation literature (as well as in the present study), the conceptualization of self-monitoring is much different. Self-monitoring is only one aspect of the regulation of behaviour: the observing aspect. Self-monitoring does not include a control component as mentioned in the above quotation.

Clients seeking psychotherapy due to social anxiety report that they are caught up with themselves and cannot be comfortable (much less enjoy) the interaction (Hartman, 1983). They are too focused on such thoughts as what they are going to say, the image they are conveying and how they look. Public self-consciousness was assessed as an indication of self-monitoring. This scale measures the tendency to be aware of oneself in social situations. People high in public self-consciousness are more aware of the perception of others and are more sensitive to negative evaluation from others (Fenigstein, 1979).

Theoretically, according to Schlenker and Leary’s (1982) self-presentation model, individuals who are high in social anxiety are more focused on assessing the situation in an attempt to determine if a desired self-image will be conveyed. Therefore, one would expect a positive relationship between public self-consciousness and social anxiety.

Results from the present study with respect to self-monitoring are equivocal. It was hypothesized that public self-consciousness would be positively related to social anxiety, a result that was obtained with only one of the measures of social anxiety. The Social Anxiety subscale of the Self-consciousness scale was moderately positively correlated ($r = .40$) with the Public Self-consciousness subscale (also a subscale of the Self-consciousness scale). This result may be due to the fact that both of these measures are subscales of the same scale and have items next to one another and are responded to in the same manner (see Appendix E). Regression analyses did, however, provide additional support for the relationship between public self-consciousness and social anxiety. Public self-consciousness was a significant predictor of social anxiety in the regression model predicting EMAS-Social Evaluation Trait Anxiety and approached significance in the regression model predicting the SCS social anxiety measure.

Kirschenbaum (1987) presented an "obsessive compulsive" approach for treating addictive behaviours. Individuals are to engage in rigid self-monitoring. It has been speculated that obsessive self-monitoring may be part of the problem in individuals who are high in social anxiety (Alden & Cappe, 1986; Endler & Kocovski, in press). The constant focus on the self reduces awareness of the social situation. Excessive public self-consciousness has been shown to be maladaptive with respect to social situations

(Christensen, 1982). Finally, Alden and Cappe (1986) developed a form of therapy designed to decrease public self-consciousness in socially anxious individuals. The focus of the therapy is to redirect a client's attention from themselves to others. They presented evidence to support a shift in attentional focus and, more importantly, this shift was found to be related to better social functioning.

Overall, in the present study results with respect to self-monitoring were equivocal. Past research has also been equivocal in that some researchers have found public self-consciousness and social anxiety to be correlated (Buss, 1980; Fenigstein et al., 1975; Lennox, 1984; Pilkonis, 1977) while others have not (Linder & Der-Karabetian, 1986).

Self-Evaluation

Moderate negative correlations were found between each of the three measures of social anxiety and self-esteem (r ranged from $-.40$ to $-.54$). Evaluating oneself unfavourably was found to be related to experiencing anxiety in social situations. This result is consistent with previous research (Jones et al., 1986; Leary & Kowalski, 1993; McCroskey, 1977; Zimbardo, 1977). Additionally, related research has shown that socially anxious individuals are more accurate regarding negative information regarding

themselves than positive information (O'Banion & Arkowitz, 1977). Although the relationship between self-esteem and social anxiety appears to be a stable finding, self-esteem was found only to be a significant predictor of social anxiety in the multiple regression analysis in which the Social Avoidance and Distress Scale was the dependent measure of social anxiety.

It was hypothesized (*a priori*) that the fear of negative evaluation would mediate between self-esteem and social anxiety. Evaluating oneself unfavourably may result in the expectation that others will evaluate negatively as well (Leary & Kowalski, 1995). The fear of negative evaluation (Watson & Friend, 1969) also was entered in the regression models and was a significant predictor in each model. Subsequent regression analyses provided support for the assertion that the fear of negative evaluation is a mediator (but not a complete mediator) between self-esteem and social anxiety. More specifically, low self-esteem is related to an increased fear of negative evaluation which is related to increased social anxiety. A person who has low self-esteem may anticipate that other people will also evaluate themselves unfavourably (Leary & Kowalski, 1995). This anticipation of negative evaluation would result in increased anxiety when in the presence of others. Thus, the relationship between self-esteem and social anxiety is partially mediated by the fear of negative evaluation.

Self-Reinforcement

As hypothesized, self-reinforcement was found to be negatively correlated (r ranged from $-.33$ to $-.46$) with social anxiety. Individuals who were low on self-reinforcement were found to be high on social anxiety. This is consistent with research in self-reinforcement therapy for social anxiety (Rehm & Marston, 1968) and with the result that individuals who are high on social anxiety report less positive and more negative thoughts (Bruch et al., 1993). Additionally, amount of negative self talk has been found to correlate with social anxiety (Mahone, Bruch, & Heimberg, 1993). Self-reinforcement was not, however, a significant predictor in any of the regression analyses.

It was decided *post hoc* to determine if fear of negative evaluation mediates between self-reinforcement and social anxiety because of a combination of the following reasons: (1) self-reinforcement showed a moderate correlation with all three measures of social anxiety (r ranged from $-.33$ to $-.46$), (2) self-reinforcement was not a significant predictor in the regression analyses, and (3) self-reinforcement was also moderately related to fear of negative evaluation which was a strong predictor in each model. Based on the results of the regression analyses, it was determined that fear of negative evaluation is a mediator between self-reinforcement and social anxiety. When social

anxiety was predicted from only self-reinforcement, the relationship was significant. When fear of negative evaluation was added to the model, the previously significant relationship between self-reinforcement and social anxiety, was no longer significant. Thus, one can conclude that fear of negative evaluation mediates between self-reinforcement and social anxiety. More specifically, a low frequency of self-reinforcement is related to a higher fear of negative evaluation which is related to a higher level of social anxiety.

Why would the fear of negative evaluation be a mediator between self-reinforcement and social anxiety? One interpretation could be that because a person is not reinforcing his/her behaviour, the person does not feel that it is worthy of reinforcement which leads to an increased expectation (and hence fear) of negative evaluation from others, which leads to an increased level of social anxiety. People who are low in self-reinforcement may anticipate that others will evaluate negatively, similar to people who are low in self-esteem (Leary & Kowalski, 1995). This increased expectation of negative evaluation would serve to increase the perception of the amount of threat in a social situation, resulting in higher social anxiety.

It is important to emphasize that this mediational relationship was not hypothesized *a priori*, but rather was tested *post hoc*. There is therefore an increased

probability of committing a Type I error (rejecting the null hypothesis when it should not be rejected). Thus, conclusions regarding this mediational relationship may be premature.

Fear of negative evaluation

Fear of negative evaluation was moderately positively correlated with each measure of social anxiety (r ranged from .41 to .45) and was a significant predictor in each regression analysis. The fear of negative evaluation has been viewed as having an important association with social anxiety (Endler et al., 1991; Schlenker & Leary, 1982; Zimbardo, 1977). People who are high in fear of negative evaluation are biased towards identifying and classifying emotional expressions of others as negative (Winton, Clark, & Edelman, 1995). They are focused on identifying negative social cues from those they are interacting with due to their concern of receiving negative evaluation.

Fear of negative evaluation was included in the present study on self-regulation because it was hypothesized that the fear of negative evaluation would mediate between self-esteem and social anxiety. This hypothesis was supported. Additionally, *post hoc*, it was decided to determine if fear of negative evaluation mediates between self-reinforcement and social anxiety; a relationship which was also supported. Thus, fear of negative evaluation was found to mediate between two components of self-regulation and

social anxiety: self-evaluation and self-reinforcement. Low self-esteem and low self-reinforcement both lead to an increased fear of negative evaluation, which results in higher anxiety. Low self-esteem and low self-reinforcement both result in the expectation (and hence fear) that others will evaluate unfavourably. This leads to an increased perception of the amount of threat in social situations, resulting in increased social anxiety.

Self-Regulation: Predicting Social Anxiety

The first run regression models predicting social anxiety each included all of the aspects of self-regulation: goal setting, self-monitoring, self-evaluation, and self-reinforcement. Additionally, fear of negative evaluation was put into the model due to the predicted mediational relationship between self-evaluation and social anxiety. State depression was also put into the model so that it could be controlled for due to comorbidity between anxiety and depression (Endler et al., 1998). Depression was not a significant predictor in any of the models.

The two constructs that emerged as significant predictors in all three models were goal setting and fear of negative evaluation. The three models accounted for between 33 and 40 % of the variance in social anxiety. The variables that appear to be most important

as far as self-regulation and social anxiety are: goal setting and fear of negative evaluation. Public self-consciousness was a significant predictor or approached significance in two of the models predicting social anxiety, while self-esteem was a significant predictor in the third model. Self-reinforcement was not found to be a significant predictor in any of the models predicting social anxiety, but was significantly correlated with social anxiety and has been shown to be related to social anxiety through a mediator: fear of negative evaluation. Thus, all of these variables in self-regulation appear to be important in social anxiety.

Social anxiety, expectancy for success, and fear of negative evaluation are all future oriented variables. A general concern for the future or worry regarding the future that may be present in socially anxious individuals may tie these variables all together.

The present study provided support for the assertion that aspects of the theory of self-regulation account for some of the variation in social anxiety. Goal setting was shown to be directly implicated. Self-esteem and self-reinforcement were shown to have their effects through a mediator, namely fear of negative evaluation. Results regarding self-monitoring were equivocal.

Social Anxiety-Should behaviourally oriented items be included in its assessment?

Three measures of social anxiety were included in the present study. Two measures of social anxiety that do not include behaviourally oriented items were included. The Endler Multidimensional Anxiety Scales Trait Social Evaluation Anxiety (EMAS-T-SE) measure was the primary measure chosen due to its strong reliability and validity (Endler et al., 1991). A second measure that does not include behaviourally oriented items, the Social Anxiety subscale of the Self-Consciousness Scale (SCS-SA), was included as a comparison measure (Fenigstein et al., 1975). Replication is very important in (psychological) research and the use of more than one measure is a form of replication (Keppel, 1982). One can draw conclusions with increased certainty that the differences in analyses between measures that include avoidance behaviours and those that do not are, in fact, due to the inclusion of the avoidance items and are not an artifact of the actual measurement instruments used. The Social Avoidance and Distress (SAD) scale was the only one of the three measures that includes behaviourally oriented items (Watson & Friend, 1969). It was included as the measure that includes avoidance and other such behaviours as part of the assessment of social anxiety. Another psychometrically sound measure of social anxiety including avoidance behaviours could not be found (see Leary & Kowalski, 1995 for a review of measures).

Correlational results among the three measures of social anxiety with the components of self-regulation were very similar. This is consistent with Briggs and Smith (1986) supporting the view that behaviours should be included in the assessment of social anxiety. The only exception was that public self-consciousness was positively correlated with the SCS-SA measure. Because this relationship was not found with the EMAS-T-SE, it cannot be concluded that it is due to a lack of avoidance oriented items. As previously stated, it may be a result of both scales being part of the SCS total scale or it could be representative of the equivocal results regarding public self-consciousness that have been obtained by other researchers (Linder & Der-Karabetian, 1986).

Regression analyses differed from one another depending on whether the dependent measure of social anxiety included behaviours, supporting the view that avoidance behaviours should be assessed separately from social anxiety (Leary, 1983a). Expectancy for success and fear of negative evaluation were found to be significant predictors in all three models. Self-esteem emerged as a significant predictor only in the model in which the SAD, the scale including avoidance behaviors, was the criterion variable. Self-esteem was not a significant predictor in either of the two scales in which avoidance oriented items are not included. In the EMAS-T-SE and the SCS-SA scales, however, public self-consciousness either was a significant predictor or was in the right

direction and approached significance. Public self-consciousness was not a significant predictor (and did not approach significance) in the model in which SAD was the criterion variable.

Further analyses separating the SAD into its social avoidance and distress components (as recommended by Leary, 1983a) showed that these differences regarding self-esteem and public self-consciousness could not be attributed to the presence or absence of avoidance items, consistent with Briggs and Smith (1986). One difference, however, appears to be due to the presence of avoidance items. Trait depression was found to be a significant predictor of only the SAD measure of social anxiety. Furthermore, when the avoidance and distress components were analyzed separately, trait depression was found to be a significant predictor only of social avoidance. This is consistent with Patterson and Strauss (1972), who factor analyzed the SAD and found that the behaviour items loaded on a different factor than the distress items.

It appears as though differences among the results may be attributed to the inclusion of behaviourally (avoidance) oriented items in the assessment of social anxiety. Although there is generally a high correlation between social anxiety and avoidance behaviours (Briggs & Smith, 1986), these constructs should be assessed separately (Leary, 1983a). Anxiety is an emotional state, whereas avoidance is a coping response.

Anxiety and coping are theoretically distinct constructs and are generally assessed separately (Endler, 1997). The same theory should apply to socially based anxiety. The results of the present study provide some support for the argument that the assessment of social anxiety should be conducted without the assessment of behaviours such as avoidance.

Depression

Depression was assessed in the present study so that it could be controlled for due to the comorbidity between anxiety and depression (Endler et al., 1998). The Spielberger state depression measure was chosen because it is an appropriate measure of non-clinical depression (Spielberger & Ritterband, 1996). This is a relatively new measure. The following results may provide support for the validity of this new scale. Research is currently being conducted in Endler's lab on this scale. Factor analyses on the whole depression scale are not showing separate factors that can be attributed to state and trait depression. The result that trait depression is a significant predictor of the avoidance component of the SAD, but state depression is not, is evidence of a difference between the state and trait scales.

In the present study, state depression was found to be weakly to moderately

correlated with the measures of social anxiety. This is consistent with past research that has found a relationship between anxiety and depression (Endler et al., 1998). Depression was included in each of the regression models predicting social anxiety but did not make a significant contribution and was thus removed from the models.

The more interesting results with respect to depression were with the pattern of relationships it displayed with the self-regulation variables. The pattern was very similar to the pattern of correlations between social anxiety and the self-regulation measures. This is consistent with research investigating cognitive factors in both depression and social anxiety (Alden & Phillips, 1990; Bruch et al., 1993; Ingram, 1989; Sanz & Avia, 1994). Predictions regarding depression were not made, as its measurement was for the purpose of controlling for its effects. The significant relationships involving self-regulation variables and depression will be discussed. Depression was found to be moderately negatively correlated with each of goal setting, self-esteem, and self-reinforcement, and demonstrated a low positive association with fear of negative evaluation. Also consistent with social anxiety, depression was not significantly correlated with public self-consciousness. Self-consciousness has not been found to discriminate between social anxiety and depression and neither has dysfunctional attitudes (Sanz & Avia).

The present study sought to determine if the different aspects of self-regulation contribute to social anxiety. The same may apply to depression (Endler & Kocovski, in press). With respect to goal setting, it has been thought and empirically supported in some studies that depressed individuals set unrealistically high standards for themselves (Beck, 1967; Nelson, 1977). Other research has not found a difference or has found that depressed individuals set lower standards than non-depressed individuals (Ahrens, Zeiss, & Kanfer, 1988; Kanfer & Zeiss, 1983). Also related to goal setting, depression is positively associated with socially prescribed perfectionism: depressed individuals believe that others have high standards for them (Hewitt & Flett, 1991, 1993; Martin, Flett, Hewitt, Krames, & Szanto, 1996). Kanfer and Zeiss found that depressed participants had higher standards than they are capable of achieving. Thus, depressed individuals may set goals that are at similar levels as non-depressed individuals but may not expect to achieve their goals. This was the hypothesis for the goal setting component of self-regulation with respect to social anxiety. The present study adds to this area in that depression was found to be negatively associated with expectancy for success. Individuals who were higher on depression were found to be lower on the expectancy to attain goals. Similar to socially anxious individuals, depressed individuals may set goals that are comparable to non-depressed individuals but may not expect to achieve these

goals.

Beck's (1967) theory stated that depressed individuals evaluate themselves negatively and this contributes to their depression. Consistent with past research, depression was also found to be related to negative self-evaluation (Carver & Ganellen, 1983). It has been suggested that depressed individuals engage in more self-criticism (Beck) or less positive self-reinforcement (Lewinsohn, 1974). Empirically, frequency of self-reinforcement has not been found to differ in depressed individuals (Nelson & Craighead, 1981). The present study is not consistent with that result. Depression was found to be negatively correlated with frequency of self-reinforcement. Individuals who were higher on depression were found to be lower on the frequency of self-reinforcement. Overall, relationships between depression and self-regulation are very similar as with social anxiety and self-regulation. Not only do the same self-regulation variables appear to be relevant to both social anxiety and depression, they also seem to be of similar magnitude and in the same direction.

Although, social anxiety and depression share cognitive features, they are different from one another (Ingram, 1989). It is important to briefly point out some differences that have been found to exist between depression and social anxiety. Depressed individuals have been found to have social perceptions that are no different

from controls, whereas socially anxious individuals were found to be nonassertive and avoidant (Alden & Phillips, 1990). Furthermore, positive automatic thinking has been shown to be impaired for both depression and social anxiety but negative automatic thinking is more indicative of depression (Ingram, Sanz & Avia, 1994). Finally, Endler et al. (1998) showed that social evaluation anxiety, as well as other facets of trait anxiety, are distinct from depression in an undergraduate sample.

Self-Consciousness

Another aim of the present study was to examine the relationship of the Self-Consciousness subscale factors with measures in the present study. It has been shown that the public and private subscales of this measure each have two factors (Mittal & Balasubramanian, 1987). The public self-consciousness scale consists of the following two factors: Style Consciousness and Appearance Consciousness. These factors displayed similar correlations with other measures in the present study. The private SCS consists of Internal State Awareness and Self-Reflectiveness factors. These factors related differently with various measures in the present study and will be discussed in more detail, starting with their relationships with social anxiety and moving on to look at the other measures in the present study.

Researchers have concluded that public self-consciousness is positively correlated with social anxiety and that private self-consciousness is unrelated to social anxiety (Buss, 1980; Fenigstein et al., 1975; Monfries & Kafer, 1993). More recently, research into the factors of the self-consciousness scale has initiated another look at the relationship between private self-consciousness and social anxiety. Social anxiety was found to be moderately positively related to self-reflectiveness, but not related to internal state awareness. This is consistent with previous research by Watson and colleagues (Reeves et al., 1995; Watson, Hickman, Morris, Stutz, & Whiting, 1994; Watson et al., 1996). An example of an item from the self-reflectiveness factor is "I'm always trying to figure myself out". "I'm generally attentive to my inner feelings" is an item from the internal state awareness factor. Thus private self-consciousness is an important variable in social anxiety research that in the past has been disregarded due to the lack of an association. Moreover, it is the self-reflectiveness component of private self-consciousness that bears the relationship. An awareness of inner feelings or mood is not important for social anxiety. It is the self-reflection that is related to social anxiety. The more one engages in self-reflection, the higher the social anxiety.

Self-Reflectiveness has been found to be positively correlated with maladaptive constructs (e.g., depression, shame, guilt) and negatively related to adaptive constructs

(e.g., self-esteem), while the opposite has been found for the Internal State Awareness factor (Watson et al., 1989; Watson et al., 1996). Results from the present study are consistent with past research (Mittal & Balasubramanian, 1987; Watson et al., 1989; Watson et al., 1996). Self-Reflectiveness was positively correlated with social anxiety (all measures), state depression, and fear of negative evaluation (i.e., maladaptive constructs). Self-Reflectiveness was negatively correlated with expectancy for success, self-esteem, and self-reinforcement (i.e., adaptive constructs). As in past research, Internal State Awareness displayed an opposite pattern of correlations in the present study (Mittal & Balasubramanian, 1987; Watson et al., 1989; Watson et al., 1996). Internal State Awareness was positively related to expectancy for success, self-esteem, and self-reinforcement (adaptive constructs). None of the other relationships between internal state awareness and each of the other measures in the present study were significant, although an examination of the correlations (in Table 7) shows a trend in the direction of a negative relationship between internal state awareness and several of the maladaptive constructs in the present study.

Britt (1992) argued in favour of the original three-factor structure, using factor analytic statistical methods as support. Britt found that the three-factor solution provides a closer fit to the data than a four-factor solution (comprised of Internal State Awareness,

Self-Reflectiveness, Public Self-Consciousness, and Social Anxiety). Adopting a three-factor solution based on the results of factor analysis ignores the problems associated with the opposite relationships that the two factors of the Private Self-Consciousness subscales display with other constructs.

The main concern with the factor structure and the interpretability of the Self-Consciousness scale lies with the Private Self-consciousness subscale. The two factors that comprise this subscale, display opposite relationships with other measures. The present study added support to the existing literature showing the problems associated with the use of this subscale (Mittal & Balasubramanian, 1987; Piliavin & Charng, 1988; Watson et al., 1989; Watson et al., 1996). The relationship between the private SCS factors and each of fear of negative evaluation, expectancy for success, and frequency of self-reinforcement have not been previously examined. These relationships follow the same pattern as past research in that self-reflectiveness is positively related to fear of negative evaluation and negatively related to expectancy for success and frequency of self-reinforcement, while, internal state awareness is positively related to expectancy for success and self-reinforcement (but not related to fear of negative evaluation). These factors, having opposite relationships with other measures, may explain the low internal consistency (reliability) of the private SCS. Reliability is a measure of how well items

'hang together'. Because the private SCS consists of two factors that correlate with other variables in different directions, the items as a whole would not 'hang together' very well. The existence of these factors, with different relationships with other variables makes the interpretability of this subscale quite difficult and suggests that it should not be scored as one scale (i.e., the factors should be scored and interpreted separately).

Limitations of the present study

Expectancy for success (goal setting) is an important variable for predicting social anxiety. It is unclear, however, as to whether a low expectancy to attain goals contributes to social anxiety or whether socially anxious individuals do not expect to attain their goals. The same applies to fear of negative evaluation. Is a person high on social anxiety because of a fear of negative evaluation or does a person fear negative evaluation because he/she is highly socially anxious? Due to the non-experimental nature of this thesis, causality cannot be concluded.

A second limitation concerns the assessment of self-monitoring in the present study. In self-regulation theory, self-monitoring refers to observing or paying attention to behaviour and the degree to which this is done may contribute to social anxiety. Public self-consciousness may not be the exact construct that should be measured as an

indication of self-monitoring, especially due to the confusion regarding its factors. The relationship between Snyder's self-monitoring construct (Snyder, 1974: 1986) and social anxiety is also hard to interpret. A high score on the Self-Monitoring Scale is supposed to be indicative of an individual who is effective in social interaction. Positive relationships that have been identified between the Self-Monitoring scale and social anxiety are difficult to interpret (Lennox & Wolfe, 1984). Future research could develop a measure specifically designed to measure the self-monitoring construct as it is defined in self-regulation theory.

A similar limitation is that of the assessment of the frequency of self-monitoring and self-evaluation which was done for preliminary purposes. These were assessed using one item each. These were not found to be related to social anxiety. This is consistent with past research which has not found the frequency of self-evaluation to differ between socially anxious and non-anxious groups, although it did approach significance in that study (Alden et al., 1994). Past research has also used a one item 10-point Likert scale to assess frequency of self-evaluation. Psychometrically sound methods of assessing these constructs are necessary for future research.

Self-regulation models of social anxiety do not explicitly take social skill deficits into account. Research has shown that socially anxious individuals are lower in social

skill than non-socially anxious individuals (Segrin & Kinney, 1995). The present study did not take this variable into account.

Directions for future research

The construction/use of psychometrically sound assessment tools for the assessment of frequency of self-monitoring and frequency of self-evaluation, as well as the use of a measure that more closely approximates the definition of self-monitoring have already been suggested.

The use of a clinical population, or even a general adult population, rather than an undergraduate population would increase the generalizability of the present results. Additionally, the present sample was predominantly female. There were no gender differences but this result should be reexamined in a sample that has an equal distribution of men and women. Furthermore, the use of therapy techniques based on the results of the present study with participants who are high on social anxiety, may provide additional support for the findings.

Finally, in a very recent article, Dykman (1998; in a discussion centered on depression) outlined two types of goal setting behaviours and scales for their assessment: validation seeking and growth seeking. Validation seeking individuals are those who are

concerned about proving competence and self-worth, whereas growth seeking individuals strive to grow and reach their full potential. Validation seeking was shown to be positively correlated with social anxiety while growth seeking was shown to be negatively correlated with social anxiety. The generalized expectancy for success (GESS) measure used in the present study assesses the expectancy to attain goals in general (with an emphasis on growth seeking goals). Future research can investigate these two goal orientations separately with respect to social anxiety.

The lack of an expectation to achieve goals is an important finding, both theoretically and practically. In theory, goal setting has been implicated in social anxiety but the exact relationship between goals and social anxiety has been unclear. The present study has shown that a low expectation to achieve goals is an important variable in social anxiety theory and research.

Social anxiety is a frequent complaint clients present with when seeking psychotherapy (Hartman, 1983). In practice, therapists can look at goals more closely in an attempt to have a client come to expect to attain goals. Goals may be broken down into smaller goals which may make it easier for a client to believe that he/she will be able to achieve his/her goals.

Chapter 5

SUMMARY and CONCLUSIONS

The present study investigated the self-regulation of human behaviour and the relationship of various aspects of this process with social anxiety. Self-regulation involves the following components: goal-setting, self-monitoring, self-evaluation and self-reinforcement (Carver & Scheier, 1986; Endler & Kocovski, in press; Kanfer, 1970). At the goal-setting stage, the hypothesis that participants who are lower on the expectancy to achieve goals would be higher on social anxiety was supported. Results regarding self-monitoring were equivocal. The hypothesis that participants who are lower on self-esteem would be higher on social anxiety was supported. Finally, the hypothesis that participants who are lower on self-reinforcement would be higher on social anxiety was also supported.

Fear of negative evaluation was found to act as a mediator between (1) self-esteem and social anxiety, and (2) self-reinforcement and social anxiety. Low self-esteem was found to be related to higher fear of negative evaluation, and consequently, a higher level of social anxiety. Similarly, low self-reinforcement was found to be related to higher fear of negative evaluation, and consequently, a higher level of social anxiety.

The prediction of social anxiety based on components of self-regulation was found to account for 33 to 40 % of the variance in social anxiety depending on the measure of social anxiety used in the model. Goal setting and fear of negative evaluation consistently emerged as significant predictors of social anxiety.

The results from the present study clarify and add to theory regarding social anxiety. Additionally, results may be useful in the formulation of treatment programs or approaches for patients that present with social phobia or clients that present with the intention of decreasing their social anxiety.

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Appendix B - Endler Multidimensional Anxiety Scales (EMAS)

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Name _____
 Date _____
 (Indicate sex: male) _____

EMAS

Norman S. Endler, Ph.D. FRSC
 Jean M. Edwards, Ph.D.
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Directions

The 20 items to the right are descriptions of reactions to and attitudes toward a certain situation. Circle a number from 1 (not at all) to 5 (very much) to describe your reactions to and attitudes toward this situation.

Example

You are getting ready to start the day.

NOT AT ALL ← → VERY MUCH
 1. Feel uncomfortable 1 2 3 4 5

If you feel very uncomfortable in this situation, circle the 5. If you feel somewhat uncomfortable, circle either the 2, 3, or 4, depending on how uncomfortable you are. If you do not feel uncomfortable at all in this situation, circle the 1.

If you have no questions, you may proceed to answer each item by circling the most appropriate response.

EMAS-S

For each of the following 20 items, please circle a number on the 5-point scale to indicate

How you feel at this particular moment.

| | NOT AT ALL | ← | → | VERY MUCH |
|----|------------|---|---|-----------|
| 1 | 1 | 2 | 3 | 4 5 |
| 2 | 1 | 2 | 3 | 4 5 |
| 3 | 1 | 2 | 3 | 4 5 |
| 4 | 1 | 2 | 3 | 4 5 |
| 5 | 1 | 2 | 3 | 4 5 |
| 6 | 1 | 2 | 3 | 4 5 |
| 7 | 1 | 2 | 3 | 4 5 |
| 8 | 1 | 2 | 3 | 4 5 |
| 9 | 1 | 2 | 3 | 4 5 |
| 10 | 1 | 2 | 3 | 4 5 |
| 11 | 1 | 2 | 3 | 4 5 |
| 12 | 1 | 2 | 3 | 4 5 |
| 13 | 1 | 2 | 3 | 4 5 |
| 14 | 1 | 2 | 3 | 4 5 |
| 15 | 1 | 2 | 3 | 4 5 |
| 16 | 1 | 2 | 3 | 4 5 |
| 17 | 1 | 2 | 3 | 4 5 |
| 18 | 1 | 2 | 3 | 4 5 |
| 19 | 1 | 2 | 3 | 4 5 |
| 20 | 1 | 2 | 3 | 4 5 |

Name _____ Age _____ Sex _____ Ethnic _____
 Education (optional) _____

EMAS

Norman S. Endler, Ph.D., F.R.S.C.
 Jean M. Edwards, Ph.D.
 Robert V. Smith, Ph.D.



Directions

The 40 items to the right are descriptions of reactions to and attitudes toward different types of situations. Circle a number from 1 (not at all) to 5 (very much) to describe your reactions in and attitudes toward these situations.

Example:

You are getting ready to start the day

NOT AT ALL → VERY MUCH
 1 | 2 | 3 | 4 | 5

If you feel very uncomfortable in this situation, circle the 5. If you feel somewhat uncomfortable, circle either the 2, 3, or 4, depending on how uncomfortable you are. If you do not feel uncomfortable at all in this situation, circle the 1.

Additional instructions are provided at the top of each section. Please read them carefully and answer each item by circling the most appropriate response.

If you have no questions, you may proceed to answer the items in the sections to the right.

EMAS I

The following four sections describe a general type of situation that most people have experienced. For each type of situation, some common reactions and feelings are listed. Please use the 5-point scale to indicate the degree to which you experience these reactions and feelings in the situation described in each section.

1. You are in situations where you are being evaluated by other people.

We are primarily interested in your reactions in general to those situations where you are being evaluated or observed by other people. This includes situations at work or school in sports, in social situations, etc. when people might be observing, grading, or judging you.

| | | | | | | | | |
|----|------------------------------------|------------|---|---|---|---|---|-----------|
| 1 | Seek experiences like this | NOT AT ALL | 1 | 2 | 3 | 4 | 5 | VERY MUCH |
| 2 | Feel upset | 1 | 2 | 3 | 4 | 5 | | |
| 3 | Feel tense | 1 | 2 | 3 | 4 | 5 | | |
| 4 | Feel relaxed | 1 | 2 | 3 | 4 | 5 | | |
| 5 | Have an uneasy feeling | 1 | 2 | 3 | 4 | 5 | | |
| 6 | Look forward to these situations | 1 | 2 | 3 | 4 | 5 | | |
| 7 | Feel fluttering feeling in stomach | 1 | 2 | 3 | 4 | 5 | | |
| 8 | Feel comfortable | 1 | 2 | 3 | 4 | 5 | | |
| 9 | Feel tense | 1 | 2 | 3 | 4 | 5 | | |
| 10 | Enjoy these situations | 1 | 2 | 3 | 4 | 5 | | |
| 11 | Heart beats faster | 1 | 2 | 3 | 4 | 5 | | |
| 12 | Feel secure | 1 | 2 | 3 | 4 | 5 | | |
| 13 | Feel anxious | 1 | 2 | 3 | 4 | 5 | | |
| 14 | Feel self-conscious | 1 | 2 | 3 | 4 | 5 | | |
| 15 | Feel nervous | 1 | 2 | 3 | 4 | 5 | | |

2. You are in situations where you are about to or may encounter physical danger.

We are primarily interested in your reactions in general to those situations that involve dealing with potentially painful and physically dangerous things, objects, or events, that is, situations in which you may feel actual physical pain or get physically hurt or harmed.

| | | | | | | | | |
|----|------------------------------------|------------|---|---|---|---|---|-----------|
| 16 | Seek experiences like this | NOT AT ALL | 1 | 2 | 3 | 4 | 5 | VERY MUCH |
| 17 | Feel upset | 1 | 2 | 3 | 4 | 5 | | |
| 18 | Feel tense | 1 | 2 | 3 | 4 | 5 | | |
| 19 | Feel relaxed | 1 | 2 | 3 | 4 | 5 | | |
| 20 | Have an uneasy feeling | 1 | 2 | 3 | 4 | 5 | | |
| 21 | Look forward to these situations | 1 | 2 | 3 | 4 | 5 | | |
| 22 | Feel fluttering feeling in stomach | 1 | 2 | 3 | 4 | 5 | | |
| 23 | Feel comfortable | 1 | 2 | 3 | 4 | 5 | | |
| 24 | Feel tense | 1 | 2 | 3 | 4 | 5 | | |
| 25 | Enjoy these situations | 1 | 2 | 3 | 4 | 5 | | |
| 26 | Heart beats faster | 1 | 2 | 3 | 4 | 5 | | |
| 27 | Feel secure | 1 | 2 | 3 | 4 | 5 | | |
| 28 | Feel anxious | 1 | 2 | 3 | 4 | 5 | | |
| 29 | Feel self-conscious | 1 | 2 | 3 | 4 | 5 | | |
| 30 | Feel nervous | 1 | 2 | 3 | 4 | 5 | | |

3. You are in new or strange situations

We are primarily interested in your reactions in general to novel, new, or unfamiliar situations. In feeling these involve other people or objects, or both.

| | | | | | | | | |
|----|------------------------------------|------------|---|---|---|---|---|-----------|
| 31 | Seek experiences like this | NOT AT ALL | 1 | 2 | 3 | 4 | 5 | VERY MUCH |
| 32 | Feel upset | 1 | 2 | 3 | 4 | 5 | | |
| 33 | Feel tense | 1 | 2 | 3 | 4 | 5 | | |
| 34 | Feel relaxed | 1 | 2 | 3 | 4 | 5 | | |
| 35 | Have an uneasy feeling | 1 | 2 | 3 | 4 | 5 | | |
| 36 | Look forward to these situations | 1 | 2 | 3 | 4 | 5 | | |
| 37 | Feel fluttering feeling in stomach | 1 | 2 | 3 | 4 | 5 | | |
| 38 | Feel comfortable | 1 | 2 | 3 | 4 | 5 | | |
| 39 | Feel tense | 1 | 2 | 3 | 4 | 5 | | |
| 40 | Enjoy these situations | 1 | 2 | 3 | 4 | 5 | | |
| 41 | Heart beats faster | 1 | 2 | 3 | 4 | 5 | | |
| 42 | Feel secure | 1 | 2 | 3 | 4 | 5 | | |
| 43 | Feel anxious | 1 | 2 | 3 | 4 | 5 | | |
| 44 | Feel self-conscious | 1 | 2 | 3 | 4 | 5 | | |
| 45 | Feel nervous | 1 | 2 | 3 | 4 | 5 | | |

4. You are involved in your daily routines

We are primarily interested in your reactions in general to those situations that you usually and typically encounter in your daily life. That is, how do you generally typically or usually feel for example, your daily routines might include such things as getting dressed, reading the newspaper, eating lunch, etc.

| | | | | | | | | |
|----|------------------------------------|------------|---|---|---|---|---|-----------|
| 46 | Seek experiences like this | NOT AT ALL | 1 | 2 | 3 | 4 | 5 | VERY MUCH |
| 47 | Feel upset | 1 | 2 | 3 | 4 | 5 | | |
| 48 | Feel tense | 1 | 2 | 3 | 4 | 5 | | |
| 49 | Feel relaxed | 1 | 2 | 3 | 4 | 5 | | |
| 50 | Have an uneasy feeling | 1 | 2 | 3 | 4 | 5 | | |
| 51 | Look forward to these situations | 1 | 2 | 3 | 4 | 5 | | |
| 52 | Feel fluttering feeling in stomach | 1 | 2 | 3 | 4 | 5 | | |
| 53 | Feel comfortable | 1 | 2 | 3 | 4 | 5 | | |
| 54 | Feel tense | 1 | 2 | 3 | 4 | 5 | | |
| 55 | Enjoy these situations | 1 | 2 | 3 | 4 | 5 | | |
| 56 | Heart beats faster | 1 | 2 | 3 | 4 | 5 | | |
| 57 | Feel secure | 1 | 2 | 3 | 4 | 5 | | |
| 58 | Feel anxious | 1 | 2 | 3 | 4 | 5 | | |
| 59 | Feel self-conscious | 1 | 2 | 3 | 4 | 5 | | |
| 60 | Feel nervous | 1 | 2 | 3 | 4 | 5 | | |

EMAS-P

We would like to know how you perceive the situation you are in right now. By circling a number from 1 (not at all) to 5 (very much) on the scales below please indicate

| | 1 | 2 | 3 | 4 | 5 |
|--|---|---|---|---|---|
| 1 The degree to which you perceive yourself as being in a situation where you are being evaluated, judged or observed by other people | | | | | |
| 2 The degree to which you perceive yourself as being in what might be termed a physical challenge situation that is a situation in which you might get physically hurt (injured) or feel (arch) physical pain | | | | | |
| 3 The degree to which you perceive yourself as being in what might be called a novel (new) ambiguous or unfamiliar situation that is a situation in which you do not know or are uncertain as to what is expected | | | | | |
| 4 The degree to which you perceive yourself as being in what might be called an innocuous or neutral situation that is a situation that is similar to those you usually physically or routinely encounter in your daily life | | | | | |
| 5 To what degree do you feel threatened in this situation? | | | | | |

6. Please briefly describe the situation you are in right now

7. Does anything in particular about this situation threaten you? Please specify

8. Is there anything else about this experience as a whole that you feel threatened by? Please specify

Appendix C - Spielberger State-Trait Depression Inventory

Spielberger, C. D., & Ritterband, L. M. (1996). Preliminary Test Manual for the State-Trait Depression Scale. Tampa, FL: University of South Florida. Reprinted with permission of the authors.

Self Analysis Questionnaire S-T/DEP (Form X-1)-S

Instructions: A number of statements that people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you feel right now, that is, at this moment. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

| | | Not at all | Some- what | Mode- rately So | Very Much So |
|-----|---------------------------------|---------------|---------------|-----------------------|--------------------|
| 1. | I feel strong | 1 | 2 | 3 | 4 |
| 2. | I feel blue | 1 | 2 | 3 | 4 |
| 3. | I feel healthy | 1 | 2 | 3 | 4 |
| 4. | I feel downhearted | 1 | 2 | 3 | 4 |
| 5. | I feel alive | 1 | 2 | 3 | 4 |
| 6. | I feel sad | 1 | 2 | 3 | 4 |
| 7. | I feel safe | 1 | 2 | 3 | 4 |
| 8. | I feel gloomy | 1 | 2 | 3 | 4 |
| 9. | I feel miserable | 1 | 2 | 3 | 4 |
| 10. | I feel hopeful about the future | 1 | 2 | 3 | 4 |

Self Analysis Questionnaire S-T/DEP (Form X-1)-T

Instructions: Read each statement and then circle the appropriate number to the right of the statement to indicate how you generally feel. Do not spend too much time on any one statement, but give the answer which best describes how you generally feel.

| | | Not at all | Some- what | Mode- rately So | Very Much So |
|-----|------------------|---------------|---------------|-----------------------|--------------------|
| 11. | I feel happy | 1 | 2 | 3 | 4 |
| 12. | I feel gloomy | 1 | 2 | 3 | 4 |
| 13. | I feel whole | 1 | 2 | 3 | 4 |
| 14. | I feel sad | 1 | 2 | 3 | 4 |
| 15. | I feel peaceful | 1 | 2 | 3 | 4 |
| 16. | I feel low | 1 | 2 | 3 | 4 |
| 17. | I feel depressed | 1 | 2 | 3 | 4 |
| 18. | I feel safe | 1 | 2 | 3 | 4 |
| 19. | I feel hopeless | 1 | 2 | 3 | 4 |
| 20. | I enjoy life | 1 | 2 | 3 | 4 |

Appendix D - Generalized Expectancy for Success Scale

This is a questionnaire designed to find out how people believe they will do in certain situations. Each item consists of a 5-point scale and a belief statement regarding one's expectations about events. Please indicate the degree to which you believe the statement would apply to you personally by circling the appropriate number. [1 = highly improbable, 5 = highly probable] Give the answer that you truly believe *best applies to you* and not what you would like to be true or think others would like to hear. Answer the items *carefully*, but do not spend too much time on any one item. Be sure to find an answer for *every item*, even if the statement describes a situation you presently do not expect to encounter. Answer as if you were going to be in each situation. Also try to respond to each item independently when making a choice: do not be influenced by your previous choices.

| In the future I expect that I will | highly improbable | | | highly probable | |
|--|----------------------|---|---|--------------------|---|
| 1) find that people don't seem to understand what I am trying to say. | 1 | 2 | 3 | 4 | 5 |
| 2) be discouraged about my ability to gain the respect of others. | 1 | 2 | 3 | 4 | 5 |
| 3) be a good parent. | 1 | 2 | 3 | 4 | 5 |
| 4) be unable to accomplish my goals. | 1 | 2 | 3 | 4 | 5 |
| 5) have a successful marital relationship. | 1 | 2 | 3 | 4 | 5 |
| 6) deal poorly with emergency situations. | 1 | 2 | 3 | 4 | 5 |
| 7) find my efforts to change situations I don't like are ineffective. | 1 | 2 | 3 | 4 | 5 |
| 8) not be very good at learning new skills. | 1 | 2 | 3 | 4 | 5 |
| 9) carry through my responsibilities successfully. | 1 | 2 | 3 | 4 | 5 |
| 10) discover that the good in life outweighs the bad. | 1 | 2 | 3 | 4 | 5 |
| 11) handle unexpected problems successfully. | 1 | 2 | 3 | 4 | 5 |
| 12) get the promotions I deserve. | 1 | 2 | 3 | 4 | 5 |
| 13) succeed in the projects I undertake. | 1 | 2 | 3 | 4 | 5 |
| 14) not make any significant contributions to society. | 1 | 2 | 3 | 4 | 5 |
| 15) discover that my life is not getting much better. | 1 | 2 | 3 | 4 | 5 |
| 16) be listened to when I speak. | 1 | 2 | 3 | 4 | 5 |
| 17) discover that my plans don't work out too well. | 1 | 2 | 3 | 4 | 5 |
| 18) find that no matter how hard I try, things just don't turn out the way I would like. | 1 | 2 | 3 | 4 | 5 |
| 19) handle myself well in whatever situation I'm in. | 1 | 2 | 3 | 4 | 5 |
| 20) be able to solve my own problems. | 1 | 2 | 3 | 4 | 5 |
| 21) succeed at most things I try. | 1 | 2 | 3 | 4 | 5 |
| 22) be successful in my endeavours in the long run. | 1 | 2 | 3 | 4 | 5 |
| 23) be very successful working out my personal life. | 1 | 2 | 3 | 4 | 5 |
| 24) experience many failures in my life. | 1 | 2 | 3 | 4 | 5 |
| 25) make a good impression on people I meet for the first time. | 1 | 2 | 3 | 4 | 5 |
| 26) attain the career goals I have set for myself. | 1 | 2 | 3 | 4 | 5 |
| 27) have difficulty dealing with my superiors. | 1 | 2 | 3 | 4 | 5 |
| 28) have problems working with others. | 1 | 2 | 3 | 4 | 5 |
| 29) be a good judge of what it takes to get ahead. | 1 | 2 | 3 | 4 | 5 |
| 30) achieve recognition in my profession. | 1 | 2 | 3 | 4 | 5 |

Appendix E - Self-consciousness Scale

Please respond to the following items according to the scale that 0 is extremely uncharacteristic and 4 is extremely characteristic.

| | | | | | |
|---|---|---|---|---|---|
| 1) I'm always trying to figure myself out. | 0 | 1 | 2 | 3 | 4 |
| 2) I'm concerned about my style of doing things. | 0 | 1 | 2 | 3 | 4 |
| 3) Generally, I'm not very aware of myself. | 0 | 1 | 2 | 3 | 4 |
| 4) It takes me time to overcome my shyness in new situations. | 0 | 1 | 2 | 3 | 4 |
| 5) I reflect about myself a lot. | 0 | 1 | 2 | 3 | 4 |
| 6) I'm concerned about the way I present myself. | 0 | 1 | 2 | 3 | 4 |
| 7) I'm often the subject of my own fantasies. | 0 | 1 | 2 | 3 | 4 |
| 8) I have trouble working when someone is watching me. | 0 | 1 | 2 | 3 | 4 |
| 9) I never scrutinize myself. | 0 | 1 | 2 | 3 | 4 |
| 10) I get embarrassed very easily. | 0 | 1 | 2 | 3 | 4 |
| 11) I'm self-conscious about the way I look. | 0 | 1 | 2 | 3 | 4 |
| 12) I don't find it hard to talk to strangers. | 0 | 1 | 2 | 3 | 4 |
| 13) I'm generally attentive to my inner feelings. | 0 | 1 | 2 | 3 | 4 |
| 14) I usually worry about making a good impression. | 0 | 1 | 2 | 3 | 4 |
| 15) I'm constantly examining my motives. | 0 | 1 | 2 | 3 | 4 |
| 16) I feel anxious when I speak in front of a group. | 0 | 1 | 2 | 3 | 4 |
| 17) One of the last things I do before I leave my house is look in the mirror. | 0 | 1 | 2 | 3 | 4 |
| 18) I sometimes have the feeling that I'm off somewhere watching myself. | 0 | 1 | 2 | 3 | 4 |
| 19) I'm concerned about what other people think of me. | 0 | 1 | 2 | 3 | 4 |
| 20) I'm alert to changes in my mood. | 0 | 1 | 2 | 3 | 4 |
| 21) I'm usually aware of my appearance | 0 | 1 | 2 | 3 | 4 |
| 22) I'm aware of the way my mind works when I work through a problem. | 0 | 1 | 2 | 3 | 4 |
| 23) Large groups make me nervous. | 0 | 1 | 2 | 3 | 4 |

Appendix E - Self-consciousness Scale (continued)

Public Self-consciousness Items:

- 1) I'm concerned about my style of doing things.
- 2) I'm concerned about the way I present myself.
- 3) I'm self-conscious about the way I look.
- 4) I usually worry about making a good impression.
- 5) One of the last things I do before I leave my house is look in the mirror.
- 6) I'm concerned about what other people think of me.
- 7) I'm usually aware of my appearance.

Private Self-consciousness Items:

- 1) I'm always trying to figure myself out.
- 2) I reflect about myself a lot.
- 3) I'm often the subject of my own fantasies.
- 4) I never scrutinize myself.
- 5) Generally, I'm not very aware of myself.
- 6) I'm generally attentive to my inner feelings.
- 7) I'm constantly examining my motives.
- 8) I sometimes have the feeling that I am off somewhere watching myself.
- 9) I'm alert to changes in my mood.
- 10) I'm aware of the way my mind works when I work through a problem.

Social Anxiety Items:

- 1) It takes me time to overcome my shyness in new situations.
- 2) I have trouble working when someone is watching me.
- 3) I get embarrassed very easily.
- 4) I don't find it hard to talk to strangers.
- 5) I feel anxious when I speak in front of a group of people.
- 6) Large groups make me nervous.

Appendix F - Rosenberg Self-Esteem Scale

Respondents are asked to strongly agree, agree, disagree, or strongly disagree with the following items:

| | | | | |
|---|----|---|---|----|
| 1) On the whole, I am satisfied with myself. | SA | A | D | SD |
| 2) At times I think I am no good at all. | SA | A | D | SD |
| 3) I feel that I have a number of good qualities. | SA | A | D | SD |
| 4) I am able to do things as well as most other people. | SA | A | D | SD |
| 5) I feel I do not have much to be proud of. | SA | A | D | SD |
| 6) I certainly feel useless at times. | SA | A | D | SD |
| 7) I feel that I'm a person of worth, at least on an equal plane with others. | SA | A | D | SD |
| 8) I wish I could have more respect for myself. | SA | A | D | SD |
| 9) All in all, I am inclined to feel that I am a failure. | SA | A | D | SD |
| 10) I take a positive attitude toward myself. | SA | A | D | SD |

Appendix G - Brief Fear of Negative Evaluation Scale

Read each of the following statements carefully and indicate how characteristic it is of you according to the following scale: 1 = Not at all characteristic of me. 2 = Slightly characteristic of me. 3 = Moderately characteristic of me. 4 = Very characteristic of me. 5 = Extremely characteristic of me.

| | Not at all characteristic | | | | Extremely characteristic |
|--|------------------------------|---|---|---|-----------------------------|
| 1) I worry about what other people will think of me even when I know it doesn't make any difference. | 1 | 2 | 3 | 4 | 5 |
| 2) I am unconcerned even if I know people are forming an unfavorable impression of me. | 1 | 2 | 3 | 4 | 5 |
| 3) I am frequently afraid of other people noticing my shortcomings. | 1 | 2 | 3 | 4 | 5 |
| 4) I rarely worry about what kind of impression I am making on someone. | 1 | 2 | 3 | 4 | 5 |
| 5) I am afraid that others will not approve of me. | 1 | 2 | 3 | 4 | 5 |
| 6) I am afraid that people will find fault with me. | 1 | 2 | 3 | 4 | 5 |
| 7) Other people's opinions of me do not bother me. | 1 | 2 | 3 | 4 | 5 |
| 8) When I am talking to someone, I worry about what they may be thinking about me. | 1 | 2 | 3 | 4 | 5 |
| 9) I am usually worried about what kind of impression I make. | 1 | 2 | 3 | 4 | 5 |
| 10) If I know someone is judging me, it has little effect on me. | 1 | 2 | 3 | 4 | 5 |
| 11) Sometimes I think I am too concerned with what other people think of me. | 1 | 2 | 3 | 4 | 5 |
| 12) I often worry that I will say or do the wrong things. | 1 | 2 | 3 | 4 | 5 |

Appendix H - Frequency of Self-Reinforcement Questionnaire

Below are listed a number of statements concerning beliefs or attitudes people have. Indicate whether the statements are characteristic and descriptive of you by circling T, if the statement is somewhat or very *true* for yourself. Circle F if the statement is somewhat or very *false* for yourself. Please be as honest as possible. Your answers are completely anonymous.

- T F 1. When I fail at something, generally I am still able to feel good about myself.
- T F 2. I can stick to a tiresome task that I need to complete for a long time without someone encouraging me.
- T F 3. I don't often think positive thoughts about myself.
- T F 4. When I do something right, I take time to enjoy the feeling.
- T F 5. I have such high standards for what I demand of myself that I rarely meet those standards.
- T F 6. I seem to blame myself when things go wrong and am very critical of myself.
- T F 7. There are pleasurable activities which I enjoy doing alone at my leisure.
- T F 8. I usually get upset when I make mistakes because I rarely learn from them.
- T F 9. My feelings of self-confidence and self-esteem fluctuate a great deal.
- T F 10. When I succeed at small things, I become encouraged to go on.
- T F 11. Unless I do something absolutely perfectly, it gives me little satisfaction.
- T F 12. I get myself through hard things mostly by planning to enjoy myself afterwards.
- T F 13. When I make mistakes, I take time to criticize myself.
- T F 14. I encourage myself to improve by feeling good about myself or giving myself something special whenever I make some progress.
- T F 15. If I didn't criticize myself frequently, I would continue to do things poorly forever.
- T F 16. I think talking about what you've done right is being too boastful.
- T F 17. I find I feel better and do better when I silently praise myself for even small achievements.
- T F 18. I can keep trying at something when I stop to think of what I've accomplished.
- T F 19. The way I keep up my confidence is by acknowledging any success I have.
- T F 20. The way I achieve my goals is by rewarding myself every step along the way.
- T F 21. Praising yourself is being selfish and egotistical.
- T F 22. When someone criticizes me, my self-confidence is shattered.
- T F 23. I criticize myself more frequently than others criticize me.
- T F 24. I have a lot of worthwhile qualities.
- T F 25. I silently praise myself even when others do not praise me.
- T F 26. Any activity can provide some pleasure regardless of how it comes out.
- T F 27. If I don't do the best possible job, I think less of myself.
- T F 28. I should be upset if I make a mistake.
- T F 29. My happiness depends more on myself than it does on other people.
- T F 30. People who talk about their own better points are just bragging.

Appendix I: Social Avoidance and Distress Scale

Below are listed a number of statements concerning beliefs or attitudes people have. Indicate whether the statements are characteristic and descriptive of you by circling T, if the statement is somewhat or very *true* for yourself. Circle F if the statement is somewhat or very *false* for yourself. Please be as honest as possible. Your answers are completely anonymous.

- T F 1) I feel relaxed even in unfamiliar social situations.
- T F 2) I try to avoid situations which force me to be very sociable.
- T F 3) It is easy for me to relax when I am with strangers.
- T F 4) I have no particular desire to avoid people.
- T F 5) I often find social occasions upsetting.
- T F 6) I usually feel calm and comfortable at social occasions.
- T F 7) I am usually at ease when talking to someone of the opposite sex.
- T F 8) I try to avoid talking to people unless I know them well.
- T F 9) If the chance comes to meet new people, I often take it.
- T F 10) I often feel nervous or tense in casual get-togethers in which both sexes are present.
- T F 11) I am usually nervous with people unless I know them well.
- T F 12) I usually feel relaxed when I am with a group of people.
- T F 13) I often want to get away from people.
- T F 14) I usually feel uncomfortable when I am in a group of people I don't know.
- T F 15) I usually feel relaxed when I meet someone for the first time.
- T F 16) Being introduced to people makes me tense and nervous.
- T F 17) Even though a room is full of strangers, I may enter it anyway.
- T F 18) I would avoid walking up and joining a large group of people.
- T F 19) When my superiors want to talk with me, I talk willingly.
- T F 20) I often feel on edge when I am with a group of people.
- T F 21) I tend to withdraw from people.
- T F 22) I don't mind talking to people at parties or social gatherings.
- T F 23) I am seldom at ease in a large group of people.
- T F 24) I often think up excuses in order to avoid social engagements.
- T F 25) I sometimes take the responsibility for introducing people to each other.
- T F 26) I try to avoid formal social occasions.
- T F 27) I usually go to whatever social engagements I have.
- T F 28) I find it easy to relax with other people.

Appendix J: Analyses for men and women separately

Table 14: Means, Standard Deviations, and Reliabilities for men (n = 50) and women (n=124)

| | <u>Mean</u> | | <u>SD</u> | | <u>Alpha</u> | |
|-----------------------|-------------|--------|-----------|-------|--------------|-------|
| | Men | Women | Men | Women | Men | Women |
| Social Anxiety | | | | | | |
| EMAS-T-SE | 45.80 | 46.22 | 10.83 | 11.01 | .89 | .90 |
| SAD | 8.94 | 7.26 | 7.02 | 6.29 | .92 | .91 |
| SCS-SA | 13.12 | 11.92 | 5.48 | 5.56 | .82 | .80 |
| Public SCS | 18.76 | 18.63 | 4.79 | 5.33 | .77 | .78 |
| Private SCS | 24.26 | 25.04 | 5.58 | 5.83 | .64 | .68 |
| Goal Setting | 111.52 | 116.88 | 17.78 | 15.85 | .93 | .91 |
| Self-Esteem | 31.52 | 30.92 | 5.61 | 5.41 | .89 | .88 |
| Self-Reinforcement | 18.68 | 19.73 | 4.64 | 5.50 | .73 | .84 |
| Fear of Negative Eval | 31.04 | 32.18 | 7.60 | 8.08 | .89 | .91 |
| Depression (State) | 17.76 | 18.20 | 5.17 | 5.16 | .83 | .85 |

EMAS-T-SE = Endler Multidimensional Anxiety Scales-Trait-Social Evaluation scale

SAD = Social Avoidance and Distress Scale

SCS-SA = Social Anxiety subscale of the Self-Consciousness Scale

Public-SCS = Public Self-Consciousness subscale of the Self-Consciousness Scale

Private-SCS = Private Self-Consciousness subscale of the Self-Consciousness Scale

Goal Setting = Generalized Expectancy for Success Scale

Self-Esteem = Rosenberg Self-Esteem Scale

Self-Reinforcement = Frequency of Self-Reinforcement Scale

Fear of Negative Evaluation = Brief-Fear of Negative Evaluation Scale

Depression (State) = Spielberger State-Trait Depression Inventory - State scale

Appendix J (cont)

Table 15: Correlation Matrix for men and women separately

Men above the diagonal (n = 50)

Women below the diagonal (n = 124)

| | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1. EMAS-T-SE | - | .59* | .65* | .26 | -.55* | -.61* | -.48* | .61* | .45* |
| 2. SAD | .44* | - | .76* | .26 | -.70* | -.64* | -.61* | .57* | .53* |
| 3. SCS-SA | .51* | .74* | - | .46* | -.53* | -.56* | -.45* | .65* | .33 |
| 4. Public-SCS | .11 | .22 | .37* | - | -.16 | -.30* | -.32* | .70* | .19 |
| 5. Goal Setting | -.33* | -.45* | -.43* | -.13 | - | .72* | .63* | -.46* | -.60* |
| 6. Self-Esteem | -.31* | -.50* | -.37* | -.31* | .57* | - | .65* | -.60* | -.70* |
| 7. Self-Reinforce | -.28 | -.40* | -.36* | -.36* | .45* | .72* | - | -.48* | -.57* |
| 8. Fear of Neg Eval | .33* | .36* | .39* | .71* | -.16 | -.46* | -.55* | - | .38* |
| 9. State Depression | .19 | .44* | .26 | .20 | -.41* | -.55* | -.48* | .31* | - |

* p < .001

EMAS-T-SE = Endler Multidimensional Anxiety Scales-Trait-Social Evaluation scale

SAD = Social Avoidance and Distress Scale

SCS-SA = Social Anxiety subscale of the Self-Consciousness Scale

Public-SCS = Public Self-Consciousness subscale of the Self-Consciousness Scale

Goal Setting = Generalized Expectancy for Success Scale

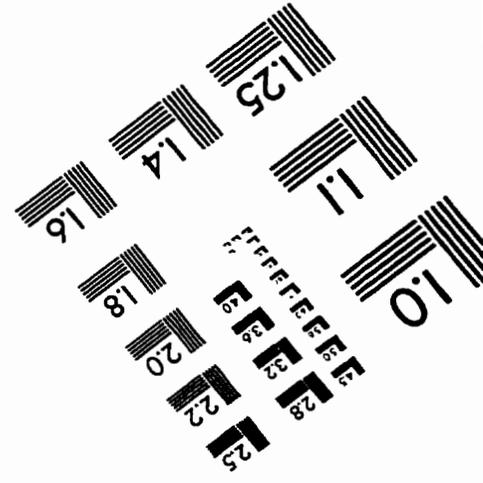
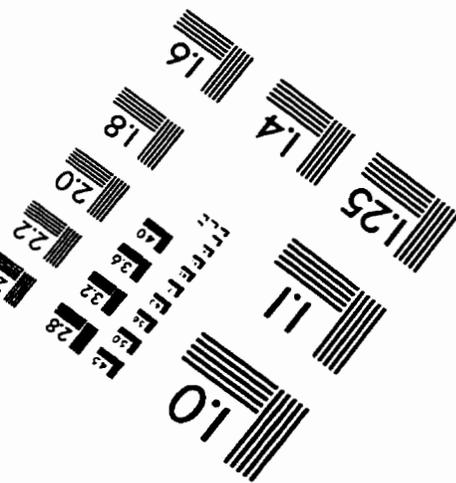
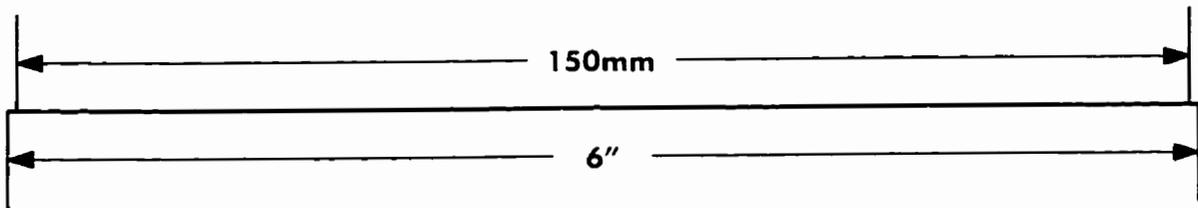
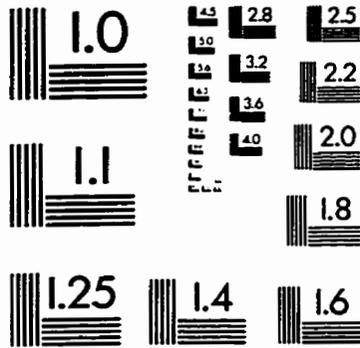
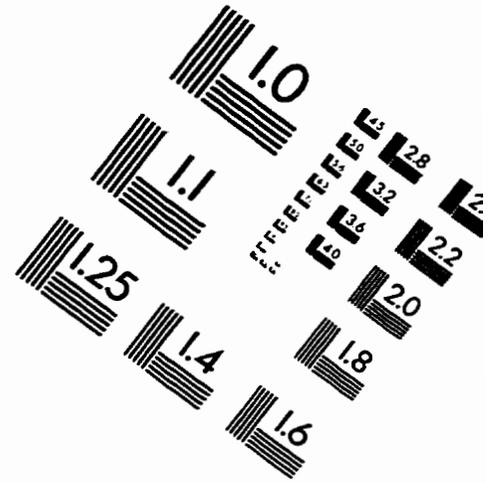
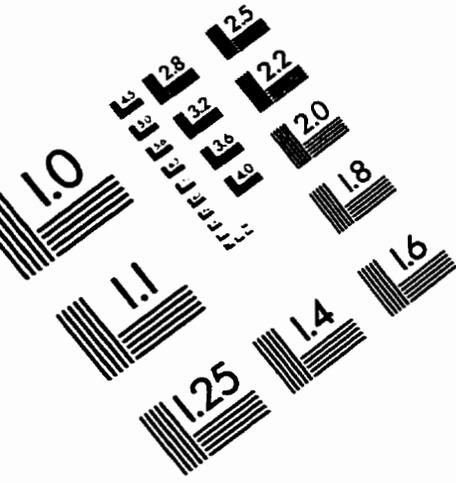
Self-Esteem = Rosenberg Self-Esteem Scale

Self-Reinforce = Frequency of Self-Reinforcement Scale

Fear of Neg Eval = Brief-Fear of Negative Evaluation Scale

Depression (State) = Spielberger State-Trait Depression Inventory - State scale

IMAGE EVALUATION TEST TARGET (QA-3)



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